

FIG. 1

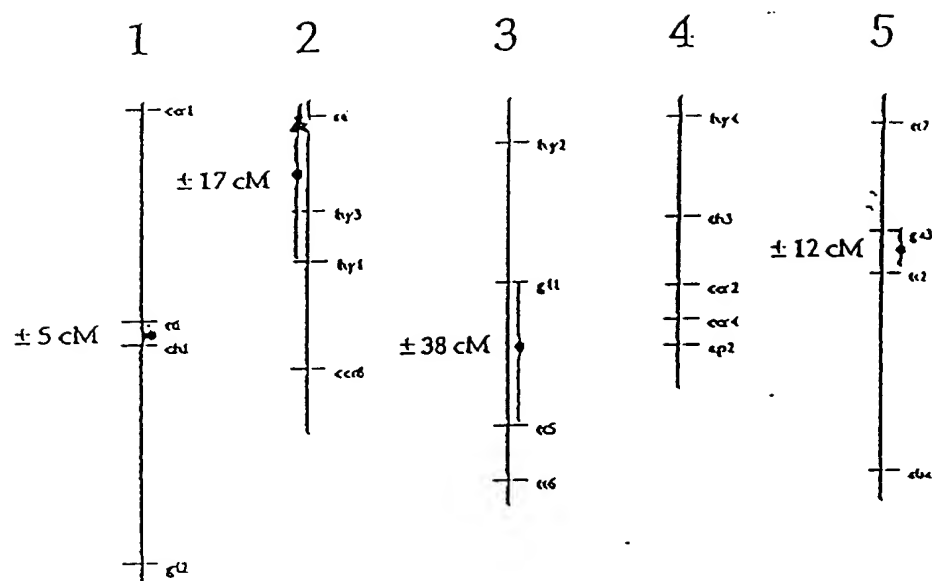


FIG. 2

200 kb

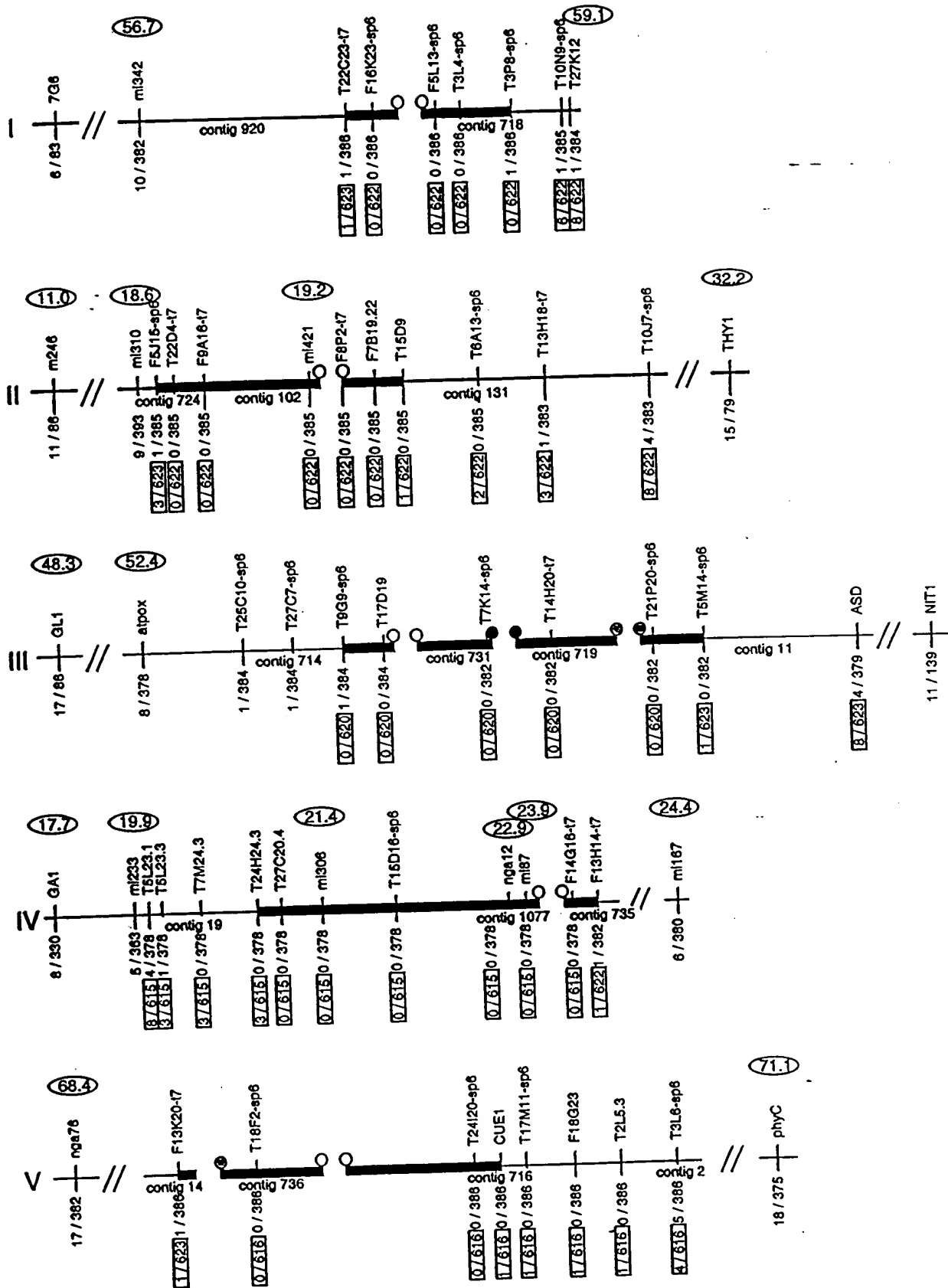


FIG. 3

		B	C	D
1	T1-1	PLA 391	tetrad seed stock	
2	T1-2	PLA 392	tetrad seed stock	
3	T1-3	PLA 393	tetrad seed stock	
4	T1-4	PLA 394	tetrad seed stock	
5				
6	T2-1	PLA 395	tetrad seed stock	
7	T2-2	PLA 396	tetrad seed stock	
8	T2-3	PLA 397	tetrad seed stock	
9	T2-4	PLA 398	tetrad seed stock	
10				
11	T3-1	PLA 399	tetrad seed stock	
12	T3-2	PLA 400	tetrad seed stock	
13	T3-3	PLA 401	tetrad seed stock	
14	T3-4	PLA 402	tetrad seed stock	
15				
16	T4-1	PLA 403	tetrad seed stock	
17	T4-2	PLA 404	tetrad seed stock	
18	T4-3	PLA 405	tetrad seed stock	
19	T4-4	PLA 406	tetrad seed stock	
20				
21	T5-1	PLA 407	tetrad seed stock	
22	T5-2	PLA 408	tetrad seed stock	
23	T5-3	PLA 409	tetrad seed stock	
24	T5-4	PLA 410	tetrad seed stock	
25				
26	T6-1	PLA 411	tetrad seed stock	
27	T6-2	PLA 412	tetrad seed stock	
28	T6-3	PLA 413	tetrad seed stock	
29	T6-4	PLA 414	tetrad seed stock	
30				
31	T7-1	PLA 415	tetrad seed stock	
32	T7-2	PLA 416	tetrad seed stock	
33	T7-3	PLA 417	tetrad seed stock	
34	T7-4	PLA 418	tetrad seed stock	
35				
36	T8-1	PLA 419	tetrad seed stock	
37	T8-2	PLA 420	tetrad seed stock	
38	T8-3	PLA 421	tetrad seed stock	
39				
40	T10-1	PLA 422	tetrad seed stock	
41	T10-2	PLA 423	tetrad seed stock	
42	T10-3	PLA 424	tetrad seed stock	
43				
44	T11-1	PLA 425	tetrad seed stock	

FIG. 4

		B	C	
45	T11-2	PLA 426	tetrad seed stock	
46	T11-3	PLA 427	tetrad seed stock	
47				
48	T12-1	PLA 428	tetrad seed stock	
49	T12-2	PLA 429	tetrad seed stock	
50	T12-3	PLA 430	tetrad seed stock	
51				
52	T13-1	PLA 431	tetrad seed stock	
53	T13-2	PLA 432	tetrad seed stock	
54	T13-3	PLA 433	tetrad seed stock	
55				
56	T14-1	PLA 434	tetrad seed stock	
57	T14-2	PLA 435	tetrad seed stock	
58	T14-3	PLA 436	tetrad seed stock	
59				
60	T18-1	PLA 437	tetrad seed stock	
61	T18-2	PLA 438	tetrad seed stock	
62	T18-3	PLA 439	tetrad seed stock	
63				
64	T20-1	PLA 440	tetrad seed stock	
65	T20-2	PLA 441	tetrad seed stock	
66	T20-3	PLA 442	tetrad seed stock	
67				
68	T27-1	PLA 443	tetrad seed stock	
69	T27-2	PLA 444	tetrad seed stock	
70	T27-3	PLA 445	tetrad seed stock	
71				
72	T28-1	PLA 446	tetrad seed stock	
73	T28-2	PLA 447	tetrad seed stock	
74	T28-3	PLA 448	tetrad seed stock	
75				
76	T29-1	PLA 449	tetrad seed stock	
77	T29-2	PLA 450	tetrad seed stock	
78	T29-3	PLA 451	tetrad seed stock	
79				
80	T30-1	PLA 452	tetrad seed stock	
81	T30-2	PLA 453	tetrad seed stock	
82	T30-3	PLA 454	tetrad seed stock	
83	T30-4	PLA 455	tetrad seed stock	
84				
85	T31-1	PLA 456	tetrad seed stock	
86	T31-2	PLA 457	tetrad seed stock	
87	T31-3	PLA 458	tetrad seed stock	
88				

FIG. 4 (cont'd)

		B	C	D
89	T32-1	PLA 459	tetrad seed stock	
90	T32-2	PLA 460	tetrad seed stock	
91	T32-3	PLA 461	tetrad seed stock	
92	T32-4	PLA 462	tetrad seed stock	
93				
94	T33-1	PLA 463	tetrad seed stock	
95	T33-2	PLA 464	tetrad seed stock	
96	T33-3	PLA 465	tetrad seed stock	
97				
98	T34-1	PLA 466	tetrad seed stock	
99	T34-2	PLA 467	tetrad seed stock	
100	T34-3	PLA 468	tetrad seed stock	
101	T34-4	PLA 469	tetrad seed stock	
102				
103	T35-1	PLA 470	tetrad seed stock	
104	T35-2	PLA 471	tetrad seed stock	
105	T35-3	PLA 472	tetrad seed stock	
106	T35-4	PLA 473	tetrad seed stock	
107				
108	T36-1	PLA 474	tetrad seed stock	
109	T36-2	PLA 475	tetrad seed stock	
110	T36-3	PLA 476	tetrad seed stock	
111	T36-4	PLA 477	tetrad seed stock	
112				
113	T37-1	PLA 478	tetrad seed stock	
114	T37-2	PLA 479	tetrad seed stock	
115	T37-3	PLA 480	tetrad seed stock	
116	T37-4	PLA 481	tetrad seed stock	
117				
118	T38-1	PLA 482	tetrad seed stock	
119	T38-2	PLA 483	tetrad seed stock	
120	T38-3	PLA 484	tetrad seed stock	
121	T38-4	PLA 485	tetrad seed stock	
122				
123	T39-1	PLA 486	tetrad seed stock	
124	T39-2	PLA 487	tetrad seed stock	
125	T39-3	PLA 488	tetrad seed stock	
126				
127	T40-1	PLA 489	tetrad seed stock	
128	T40-2	PLA 490	tetrad seed stock	
129	T40-3	PLA 491	tetrad seed stock	
130				
131	T41-1	PLA 492	tetrad seed stock	
132	T41-2	PLA 493	tetrad seed stock	

FIG. 4 (cont'd)

		B	C	D
133	T41-3	PLA 494	tetrad seed stock	
134	T41-4	PLA 495	tetrad seed stock	
135				
136	T42-1	PLA 496	tetrad seed stock	
137	T42-2	PLA 497	tetrad seed stock	
138	T42-3	PLA 498	tetrad seed stock	
139				
140	T43-1	PLA 499	tetrad seed stock	
141	T43-2	PLA 500	tetrad seed stock	
142	T43-3	PLA 501	tetrad seed stock	
143				
144	T44-1	PLA 502	tetrad seed stock	
145	T44-2	PLA 503	tetrad seed stock	
146	T44-3	PLA 504	tetrad seed stock	
147	T44-4	PLA 505	tetrad seed stock	
148				
149	T45-1	PLA 506	tetrad seed stock	
150	T45-2	PLA 507	tetrad seed stock	
151	T45-3	PLA 508	tetrad seed stock	
152	T45-4	PLA 509	tetrad seed stock	
153				
154	T46-1	PLA 510	tetrad seed stock	
155	T46-2	PLA 511	tetrad seed stock	
156	T46-3	PLA 512	tetrad seed stock	
157	T46-4	PLA 513	tetrad seed stock	
158				
159	T48-1	PLA 514	tetrad seed stock	
160	T48-2	PLA 515	tetrad seed stock	
161	T48-3	PLA 516	tetrad seed stock	
162				
163	T49-1	PLA 517	tetrad seed stock	
164	T49-2	PLA 518	tetrad seed stock	
165	T49-3	PLA 519	tetrad seed stock	
166	T49-4	PLA 520	tetrad seed stock	
167				
168	T52-1	PLA 521	tetrad seed stock	
169	T52-2	PLA 522	tetrad seed stock	
170	T52-3	PLA 523	tetrad seed stock	
171				
172	T53-1	PLA 524	tetrad seed stock	
173	T53-2	PLA 525	tetrad seed stock	
174	T53-3	PLA 526	tetrad seed stock	
175				
176	T55-1	PLA 527	tetrad seed stock	

FIG. 4 (cont'd)

FIG. 4. (cont'd)

	A	B	C	D
177	T55-2	PLA 528	tetrad seed stock	
178	T55-3	PLA 529	tetrad seed stock	
179				
180	T56-1	PLA 530	tetrad seed stock	
181	T56-2	PLA 531	tetrad seed stock	
182	T56-3	PLA 532	tetrad seed stock	
183	T56-4	PLA 533	tetrad seed stock	
184				
185	T57-1	PLA 534	tetrad seed stock	
186	T57-2	PLA 535	tetrad seed stock	
187	T57-3	PLA 536	tetrad seed stock	
188	T57-4	PLA 537	tetrad seed stock	
189				
190	T58-1	PLA 538	tetrad seed stock	
191	T58-2	PLA 539	tetrad seed stock	
192	T58-3	PLA 540	tetrad seed stock	
193				
194	T60-1	PLA 541	tetrad seed stock	
195	T60-2	PLA 542	tetrad seed stock	
196	T60-3	PLA 543	tetrad seed stock	
197	T60-4	PLA 544	tetrad seed stock	
198				
199	T61-1	PLA 545	tetrad seed stock	
200	T61-2	PLA 546	tetrad seed stock	
201	T61-3	PLA 547	tetrad seed stock	
202	T61-4	PLA 548	tetrad seed stock	
203				
204	T62-1	PLA 549	tetrad seed stock	
205	T62-2	PLA 550	tetrad seed stock	
206	T62-3	PLA 551	tetrad seed stock	
207				
208	T63-1	PLA 552	tetrad seed stock	
209	T63-2	PLA 553	tetrad seed stock	
210	T63-3	PLA 554	tetrad seed stock	
211				
212	T64-1	PLA 555	tetrad seed stock	
213	T64-2	PLA 556	tetrad seed stock	
214	T64-3	PLA 557	tetrad seed stock	
215	T64-4	PLA 558	tetrad seed stock	
216				
217	T66-1	PLA 559	tetrad seed stock	
218	T66-2	PLA 560	tetrad seed stock	
219	T66-3	PLA 561	tetrad seed stock	
220				

Chromosome #	Marker name	name used in '99 manuscript	Marker Type	Public?	Forward Primer	Reverse Primer
1	nga59		SSLP	YES		
1	nga63		SSLP	YES		
1	m59		CAPS (BstU I)	YES		
1	q2395		CAPS (Xba I)	YES		
1	m235		CAPS (Hind III)	YES		
1	athZFPQ		SSLP	YES		
1	SO392		SSLP	YES		
1	UFO		CAPS (Taq I)	YES	CGCCAAAGACTACGAAATGATC	ATAATAGATAAAGAGCCCCACAC
1	Cxc750		SSLP	NO	GGGTCTGGTTATGCCGTGAAG	GTTTACTTAGTCCAATGGTAG
1	7G6		CAPS (Acc I)	NO	AAATGGCCACGATCAGAAGAATAG	GAAGTCGGCATGTTATCACCCAAAG
1	AlG1		CAPS (Mnl I)	NO	CAAGTGCACACGGGCTCAAAAAG	AACTACGGCCTAACCACTATTCTC
1	m163		CAPS (Nla III)	NO	GAAGTGCACACGGGCTCAAAAAG	TTGCTGCCATGTATACCTAAGTG
1	m1342	m1342	CAPS (Hinf I)	NO	GAAGTGCACACGGGCTCAAAAAG	GGAGTCATTCCTTGGTACG
1	T22C23-17	T22C23-17	CAPS (Mnl II)	NO	GTTCACCTTCATTCGATTCGTTTC	GGAGTCATTCCTTGGTACG
1	T5D18-sp6	T5D18-sp6	CAPS (Acl I)	NO	AAGATAAGCGACGAGGATGCTC	GGAGTCATTCCTTGGTACG
1	F16K23-sp6	F16K23-sp6	SSLP	NO	TACCAGCATACAGGAGAGAG	GGTATTCGAGTTTATTAGG
1	T19K14-sp6	T19K14-sp6	SSLP	NO	TCCATACCTAAGTTCGACAC	AGGCGCAGTAAATGATC
1	F5L13-sp6	F5L13-sp6	CAPS (Ccd8 II)	NO	GAAGTCGGGATCTGTTTGAAG	ATAAWAGCGGAGATGCTG
1	T3L14-sp6	T3L14-sp6	CAPS (Mae II)	NO	ATTCATGAGTCGAAAGGGTAGAG	CTCAGGCAAGATGAGTAGAG
1	T3P8-sp6	T3P8-sp6	CAPS (Hae III)	NO	AAGCTTCATTCGATTCGTTTC	AGATTCGTTACGGTGGTG
1	T10N9-sp6	T10N9-sp6	SSLP	NO	GGCTTGGATGATCAGTGGTG	AGCCCTTGGATCATATCTTTAGC
1	T27K12		SSLP	YES		GAATCTTTGCAACGAGTGG
1	lcc3		CAPS (Nla III)	NO	GGCTACTGGTCAATCATTC	TTACCCCGCAGGAAAAAGTATG
1	GPCml19		CAPS (Fnu4H I)	NO	GCGGCTGATGATCTCCACCTC	
1	nga280		SSLP	YES		
1	nga128		SSLP	YES		
1	ETR		CAPS (Nco I)	YES		
1	TAG1		SSLP	YES		
1	AthATPASE		SSLP	YES		
1	nga692		SSLP	YES		
2	nga1145		SSLP	YES		
2	m246		CAPS (Mae III)	YES		

FIG. 5

[illegible]

2	mi310		SSLP	NO	ACTCATCACTTGGGACTG	GGCCCAAGAGCCCAACAC
2	F5J15-sp6	F5J15-sp6	CAPS (Hnu:HI)	NO	ACGCAAGTGTGCTGTC	GTATCTAGACAGATGTTAGGAGTTAC
2	F28M13-t7		CAPS (Mse I)	NO	ATCGCTAATTAAGCTTTTATAG	CGATGTATGATGCTAGG
2	F16D14-t7		SSLP	NO	TGAGAGGTGCAAAATCAATACAG	ACCGCTGCTGCTAG
2	T22D4-t7		CAPS (Hinf I)	NO	GGCCGCTTACAGCAGAC	AAATGATATTTAGATGTGTATTCG
2	T20I5-t7		SSLP	NO	GGTGGAGGCTGTC	ATAGAGTGTGCTGAGATGAG
2	F9A16-t7		SSLP	NO	AACGTGATTTCTAGTGTATTTATAG	GATGCTATAGGCTGTC
2	m1421b		CAPS (Hae III)	NO	TAGCTGTGCTGCTGCTGCTGCTG	AAGTGTAGCTGCTGCTGCTGCTG
2	F8P2-t7		SSLP	NO	CATCTCCATGAGGCTGCTGCTGCTG	AAGTGTAGCTGCTGCTGCTGCTG
2	T15D9-t7		SSLP	NO	GAGCCCTGCTGCTGCTGCTGCTG	AGATGCTGCTGCTGCTGCTGCTG
2	T6A13-sp6	T6A13-sp6	SSLP	NO	ATATTGCTGCTGCTGCTGCTGCTG	GTGCTGAGGCTGCTGCTGCTGCTG
2	T13H18-t7	T13H18-t7	SSLP	NO	GGTAACAGCTTCACTGCTGCTGCTG	AAAGCTGTGCTGCTGCTGCTGCTG
2	T13H18-sp6		SSLP	NO	TCTTCCCTTAATCTATTTGTTGCTG	AAAGCTGTGCTGCTGCTGCTGCTG
2	T10J7-sp6		SSLP	NO	TCTGTGCTGCTGCTGCTGCTGCTG	GCAATGCTACGCTGCTGCTGCTG
2	T17A11-t7		CAPS (Msp I)	NO	TTGTTTTCTAGGTTTTGTTGTAAG	ATGCTGCTGCTGCTGCTGCTGCTG
2	GPO8		SSLP	NO	AGTGTGCTGCTGCTGCTGCTGCTG	CTTCCATTTCTGCTGCTGCTGCTG
2	m1398		CAPS (Mnl I)	NO	ACTAAGGCTGCTGCTGCTGCTGCTG	AAAGCTGTGCTGCTGCTGCTGCTG
2	THY1B		CAPS (Rsa I)	NO	GGCGACCTTGGACCTGTATACG	AACGCTGCTGCTGCTGCTGCTGCTG
2	PhyB		CAPS (Xho I)	YES		
2	nga1126		SSLP	YES		
2	nga361		SSLP	YES		
2	nga168		SSLP	YES		
3	nga32		SSLP	YES		
3	nga172		SSLP	YES		
3	nga162		SSLP	YES		
3	ARLm		CAPS (EcoRI)	YES		
3	GAPA		SSLP	YES		
3	GL1		CAPS (Taq I)	YES		
3	atpox	atpox	CAPS (Msp I)	NO	TAGGGGACATATCAAAACCAAC	GTCTAAAACCATCTTCAACATAAT
3	T25C10-sp6	T25C10-sp6	SSLP	NO		
3	T27C7-sp6	T27C7-sp6	SSLP	NO	ATGGCTAATATTTGCTGCTGCTG	TGTGTAGTGTGCTGCTGCTGCTG
3	T9G9-sp6	T9G9-sp6	SSLP	NO	GGCAATTAATTTGCTGCTGCTGCTG	TATATGATGATGATGATGATGATG
3	T14H20-t7	T14H20-t7	SSLP	NO	GGCAATTAATTTGCTGCTGCTGCTG	GGTGTAGTGTGCTGCTGCTGCTG
3	T7K14-sp6	T7K14-sp6	SSLP	NO	TGGGCAATGCTGCTGCTGCTGCTG	TGTGTAGTGTGCTGCTGCTGCTG
3	T21P20-sp6	T21P20-sp6	CAPS (Nhe I)	NO	GGGCTGCTGCTGCTGCTGCTGCTG	TATATGCTGCTGCTGCTGCTGCTG
3	T20L24-t7	T20L24-t7	CAPS (Apo I)	NO	CTAATTTGATAGGCTGCTGCTGCTG	AAGCTGTGCTGCTGCTGCTGCTG

FIG. 5 (cot'd)

4	COP9		CAPS (Apo I)	YES	
4	SC5		CAPS (Acc I)	YES	
4	q4539		CAPS (Hind III)	YES	
4	AG		CAPS (Xba I)	YES	
4	nga1139		SSLP	YES	
4	nga1107		SSLP		
5	CTR1		SSLP	YES	
5	ca72		SSLP	YES	
5	nga106		SSLP	YES	
5	nga139		SSLP	YES	
5	SO262		SSLP	YES	
5	nga76		SSLP	YES	
5	F16K20-17	F16K20-17	CAPS (Mse I)	NO	ATTTCACACAGTTCAGTGGTC
5	T18M4-17	T18M4-17	CAPS (Sbf I)	NO	ACCCGAGTGGTTCAGTGGTC
5	T18F2-sp6	T18F2-sp6	CAPS (Mse I)	NO	ACCTTCGATACACAGTGGTC
5	T24/20-sp6	T24/20-sp6	SSLP	NO	ACCCCTGATCGCCCTTTTTC
5	GU51	GU51	CAPS (Mse I)	NO	GGGAGAAAACGTGAAGAGATAG
5	T22J22-sp6	T22J22-sp6	SSLP	NO	TTGGTGTGTTAAGAAGAGTGG
5	T17M11-sp6	T17M11-sp6	SSLP	NO	CTAATCATGTGCTTTAGGCTATC
5	T14O24-sp6	T14O24-sp6	CAPS (Tsp509 I)	NO	AGGCAGAAAAGCGTCAGG
5	F18G23	F18G23-17	SSLP	NO	TGCGCGGGAAGAACAGTAAC
5	T2L5.3K	T2L5.3	CAPS (Fnu4H I)	NO	AAAAGTTAGGTAGTAGGAAAGAAC
5	F7N22.3k1		CAPS (Bfa I)	NO	AACCCCTAGATCGCCCTTTTTC
5	T3L6-sp6	T3L6-sp6	CAPS (Mnl I)	NO	AGGATTCAGTGGCGGTTTG
5	T21K16-17		SSLP	YES	
5	phyC		SSLP	YES	
5	SO191		SSLP	YES	
5	DFR			YES	
5	LFY			YES	

FIG. 5 (cot'd)

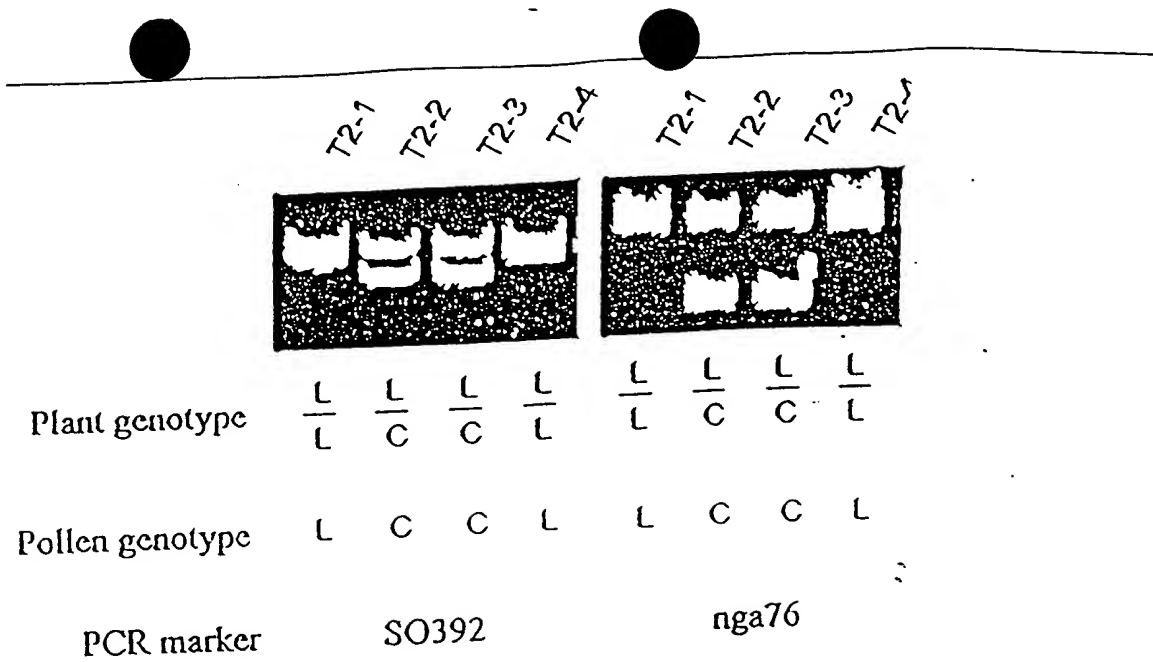


FIG. 6

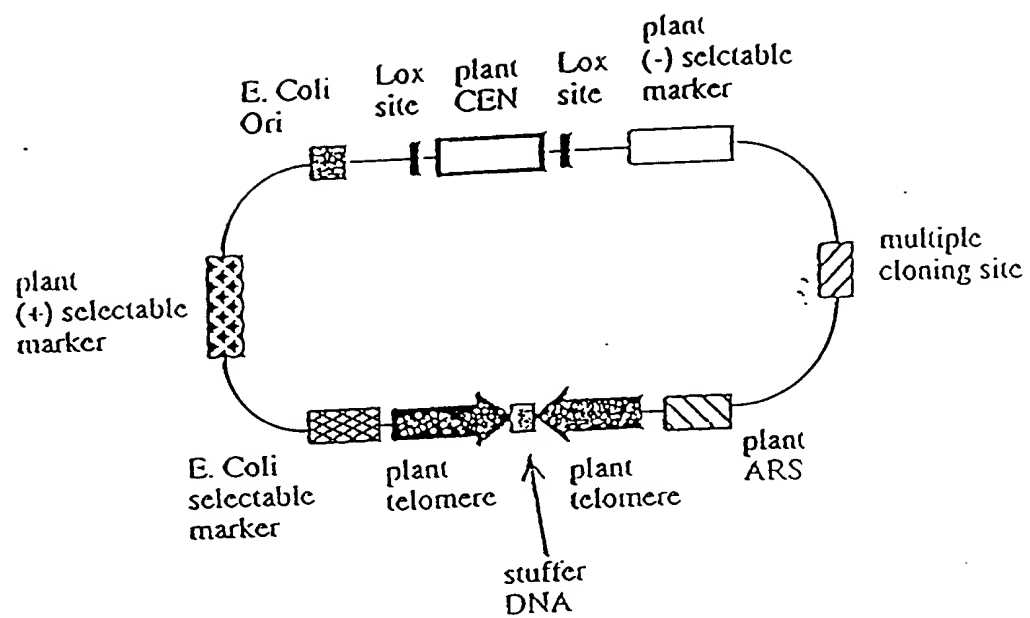


FIG. 7A

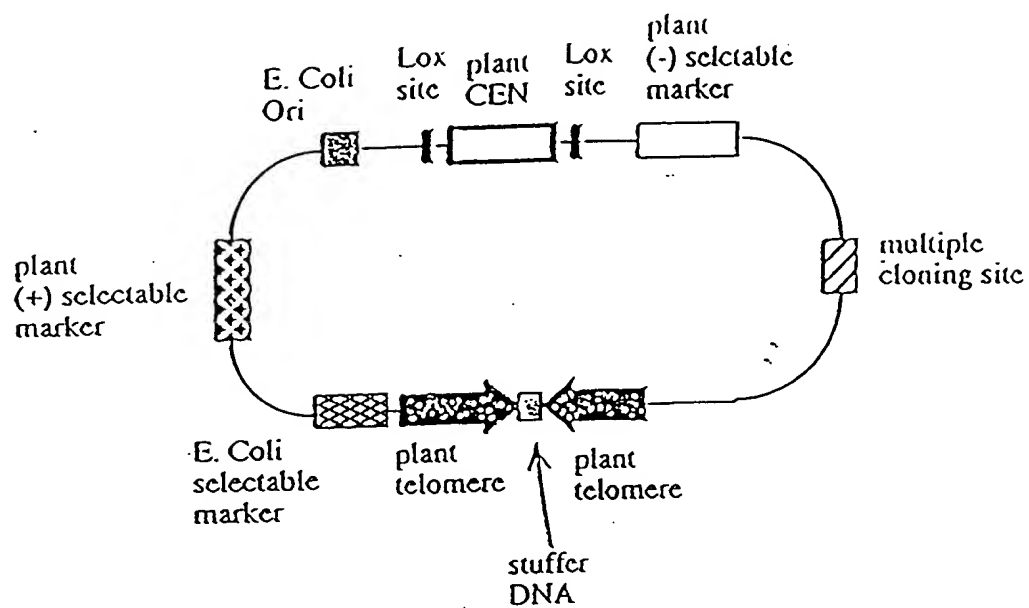


FIG. 7B

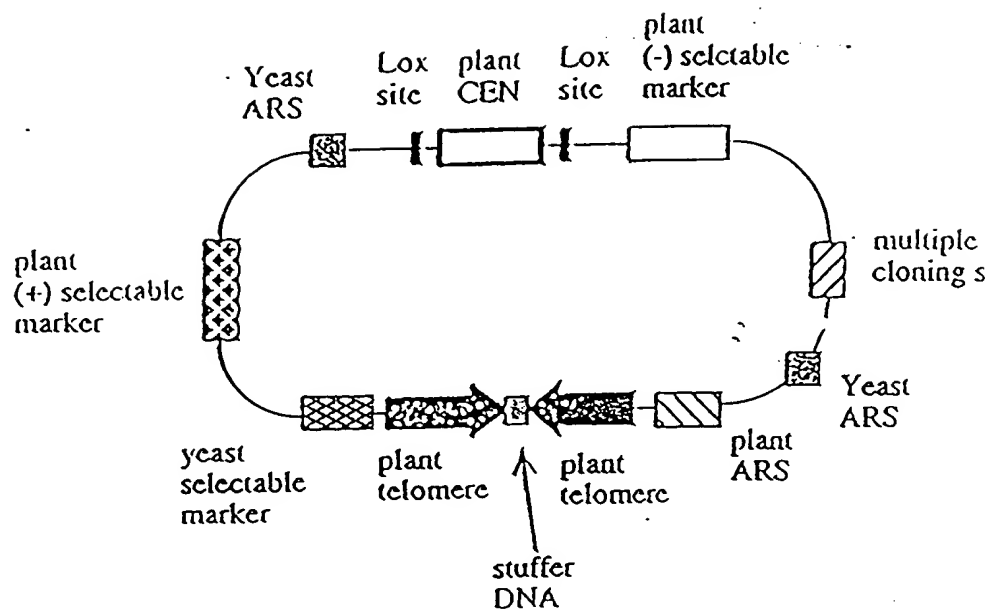


FIG. 7C

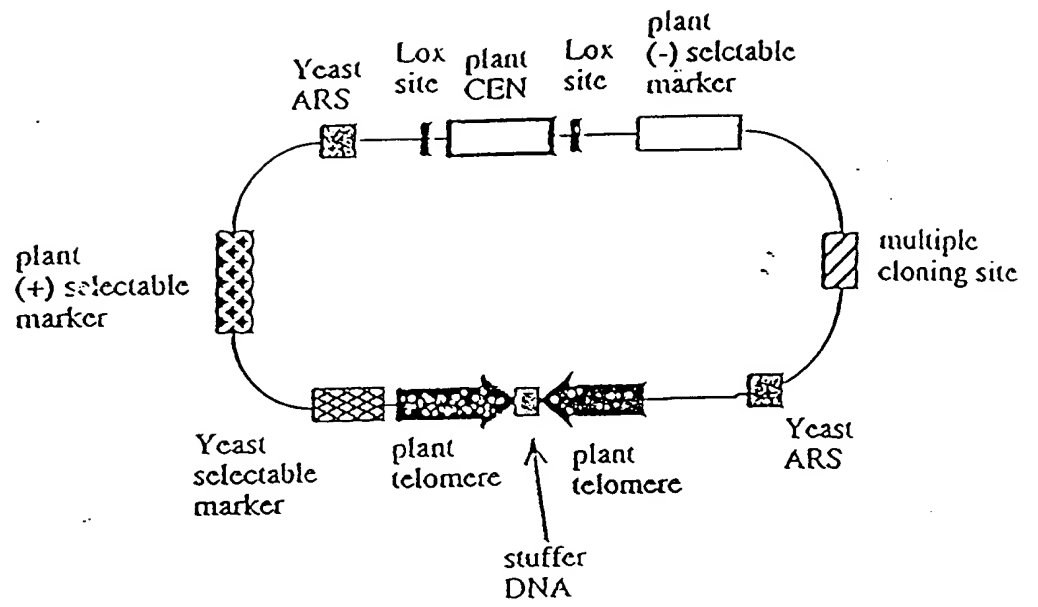


FIG. 7D

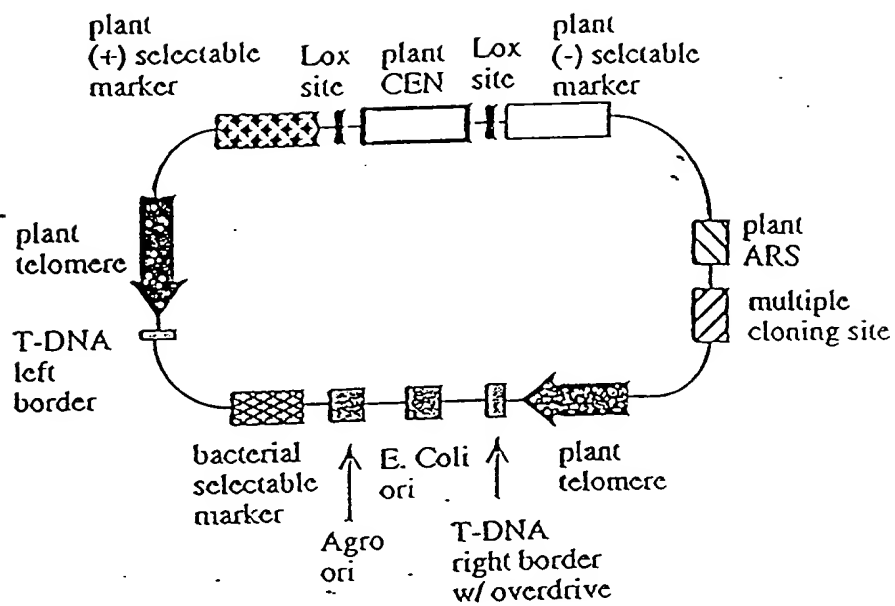


FIG. 7E

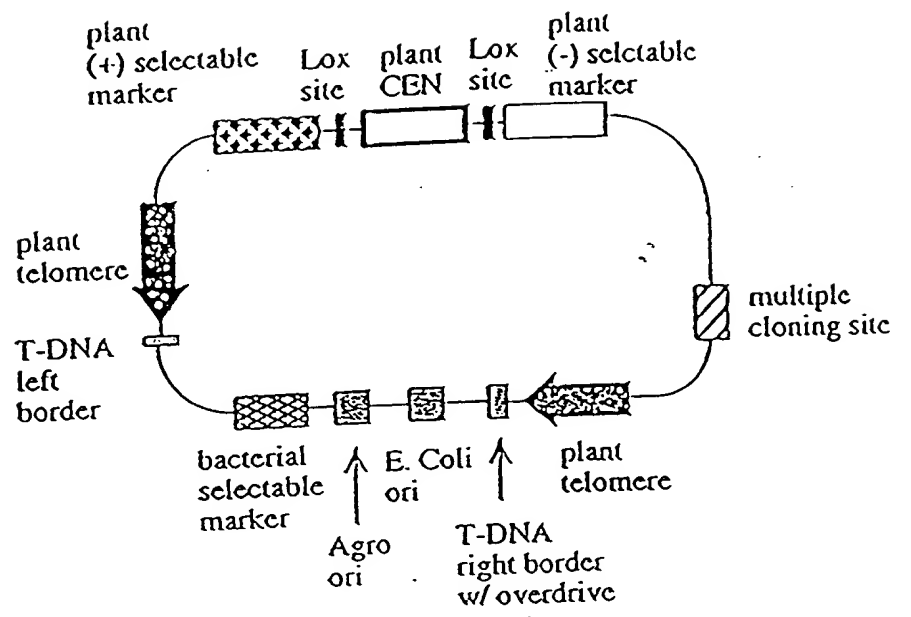


FIG. 7F

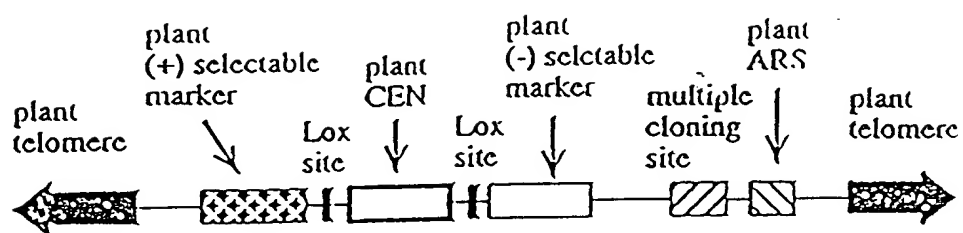


FIG. 7G

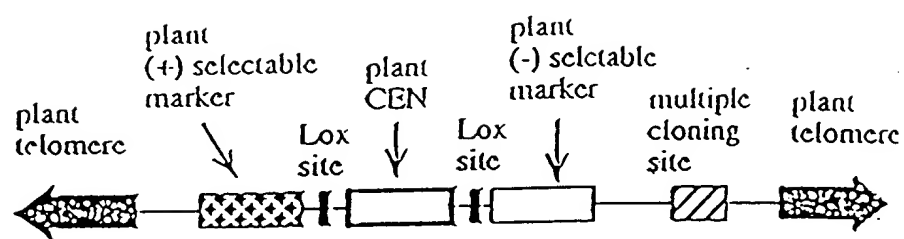


FIG. 7H

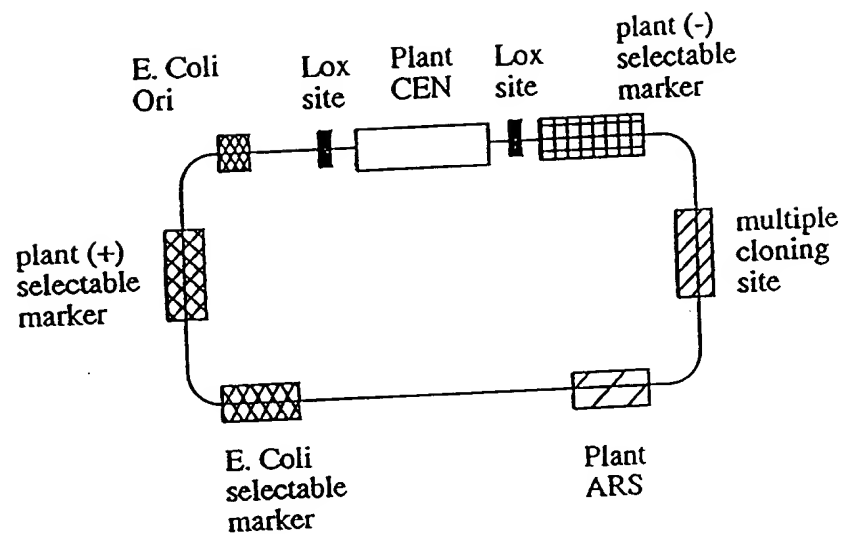


FIG. 7I

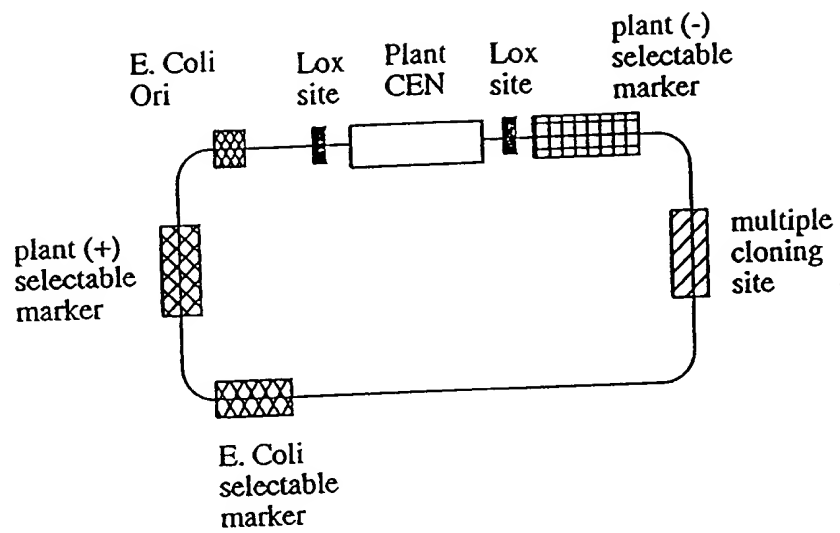


FIG. 7J

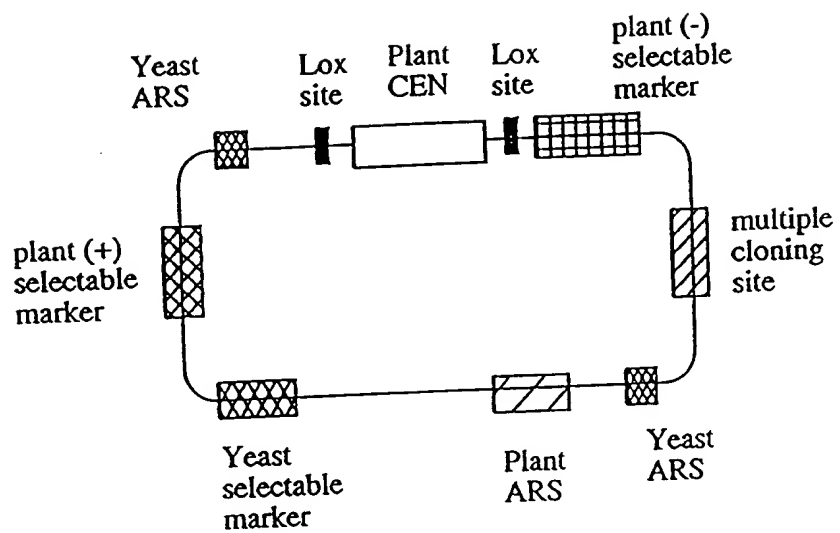


FIG. 7K

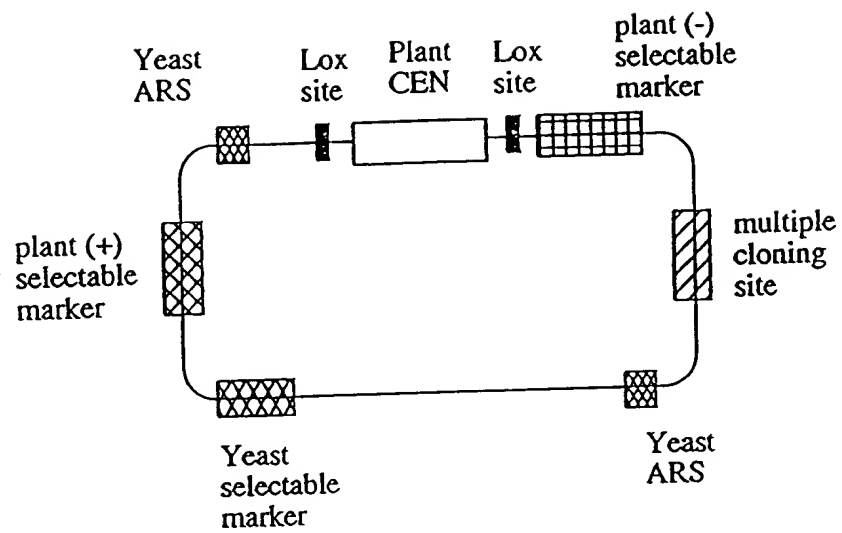


FIG. 7L

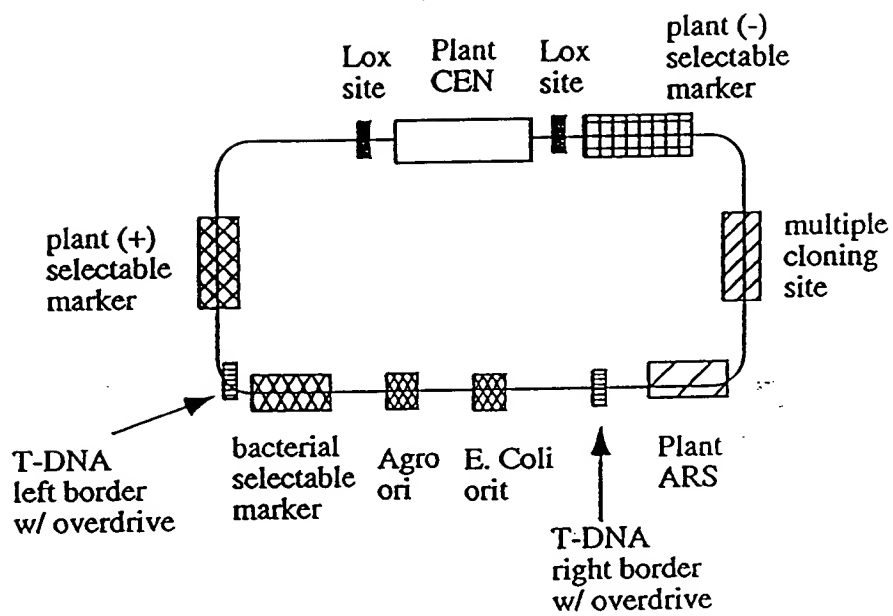


FIG. 7M

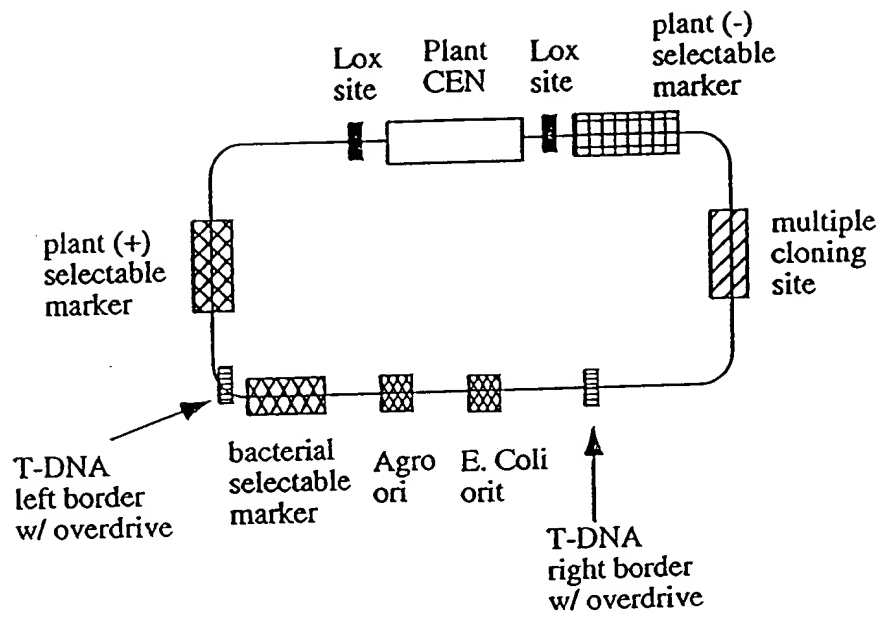
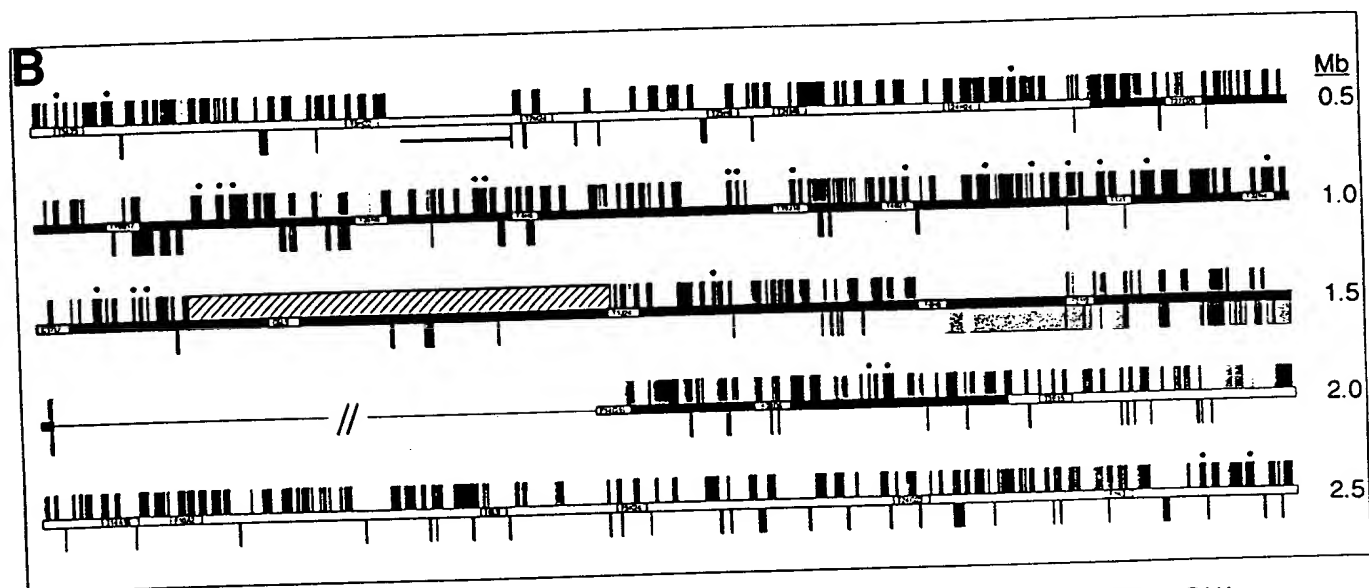
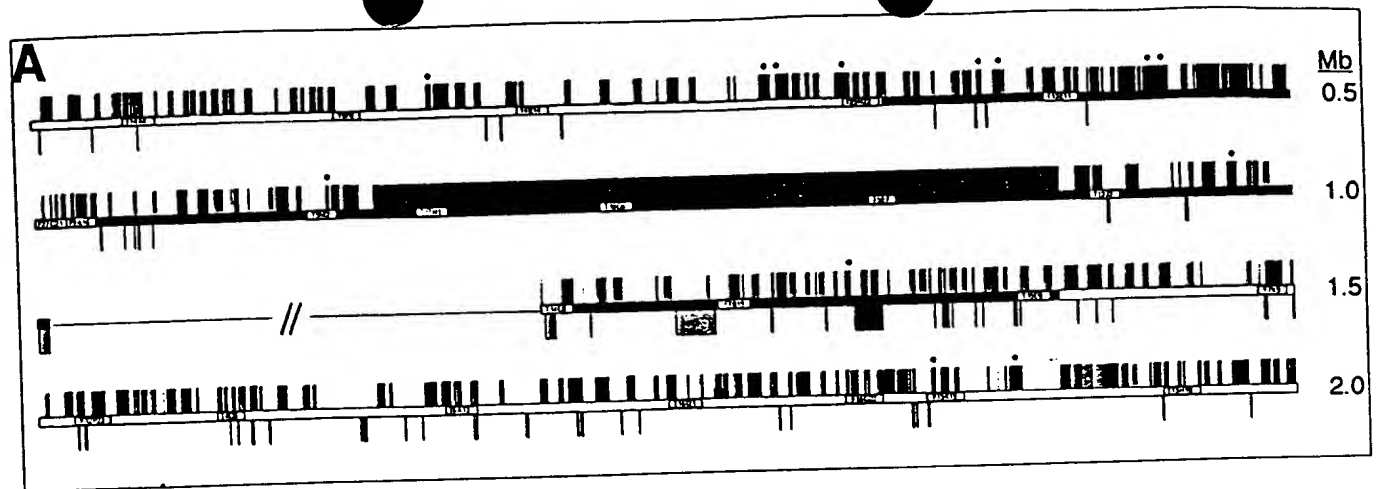


FIG. 7N



- | | | |
|--|-----------------------------------|-----------------------------------|
| Predicted genes | Retroelements | Mitochondrial DNA insertion |
| Pseudogenes | Transposons | Chromosome-specific tandem repeat |
| Genes encoded by mobile elements | Characterized centromeric repeats | Unannotated region |
| Pseudogenes encoded by mobile elements | 180-bp repeats | Expressed genes |

FIG. 8A, B

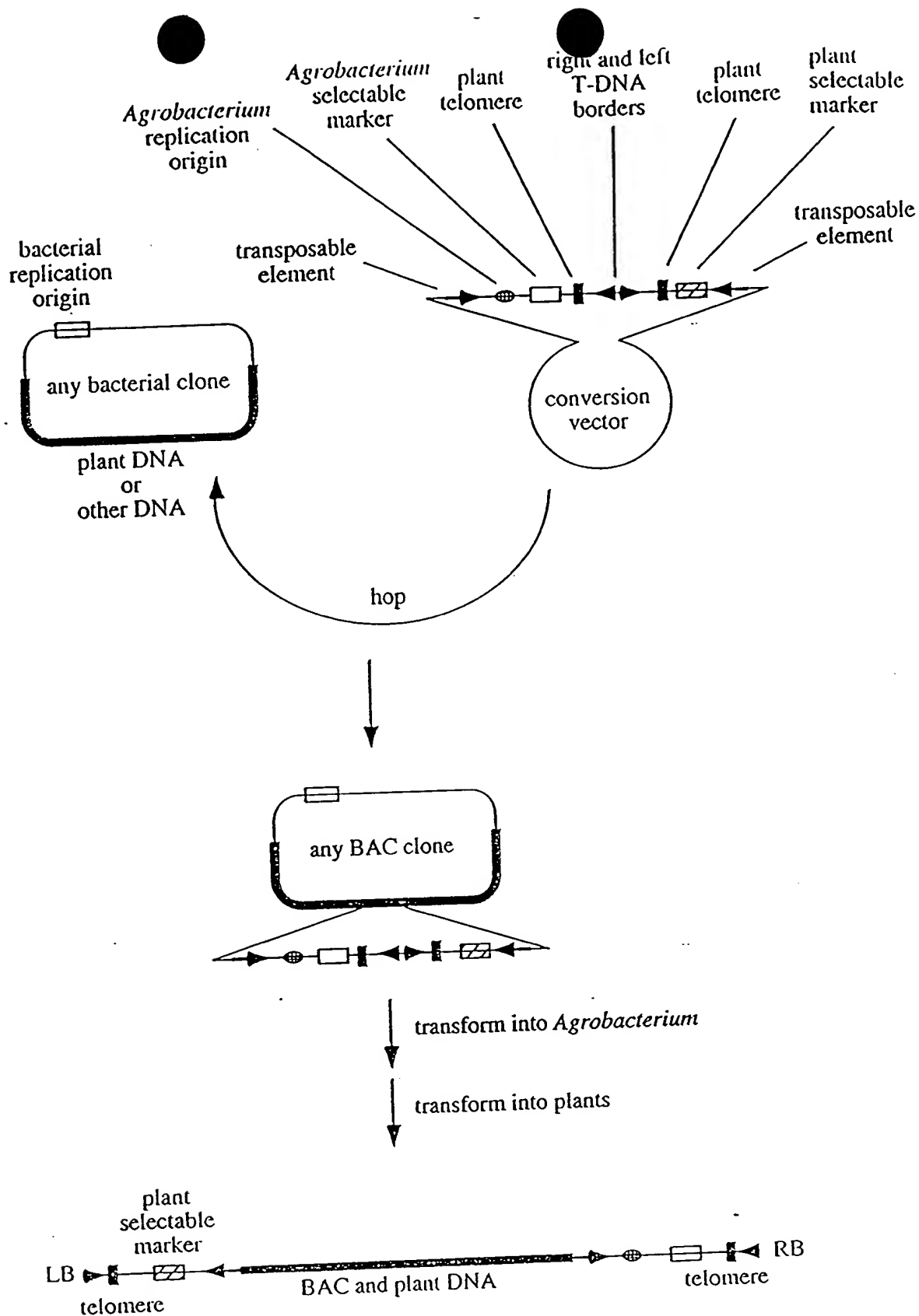
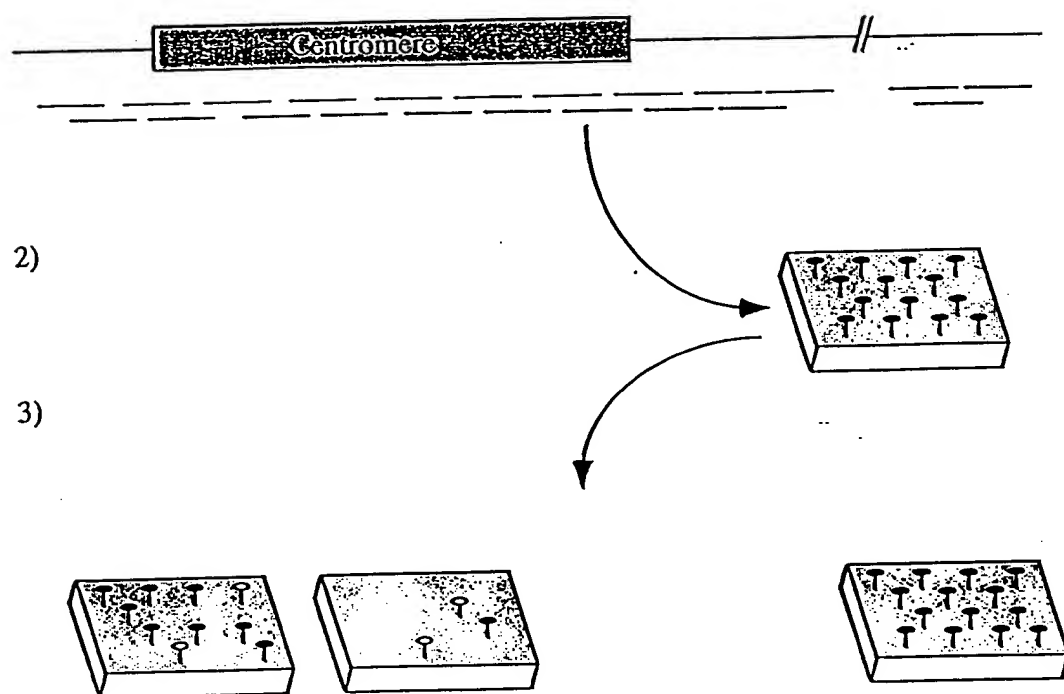
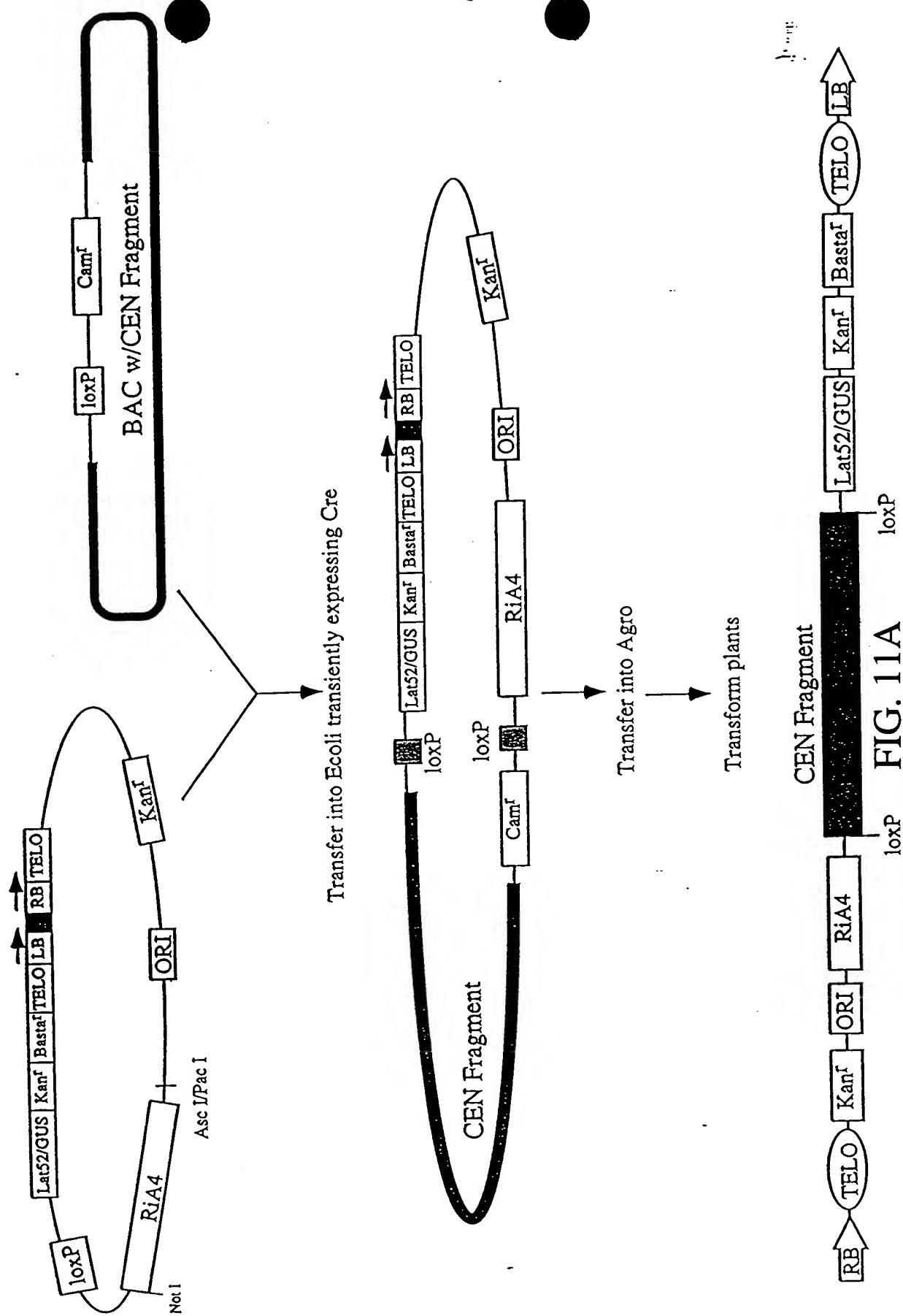


FIG. 9

[illegible]

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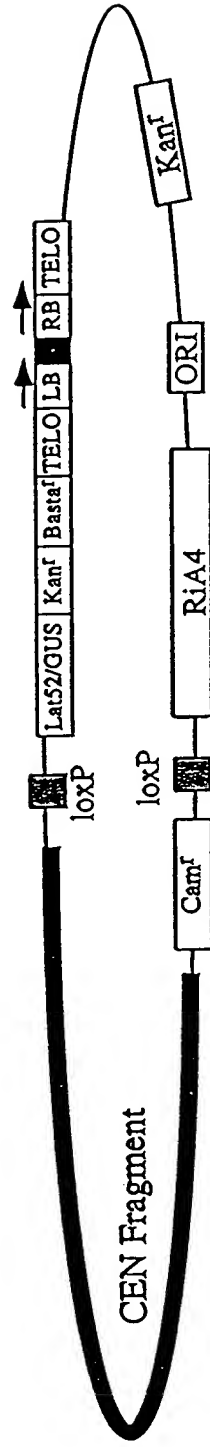


FIG. 11B

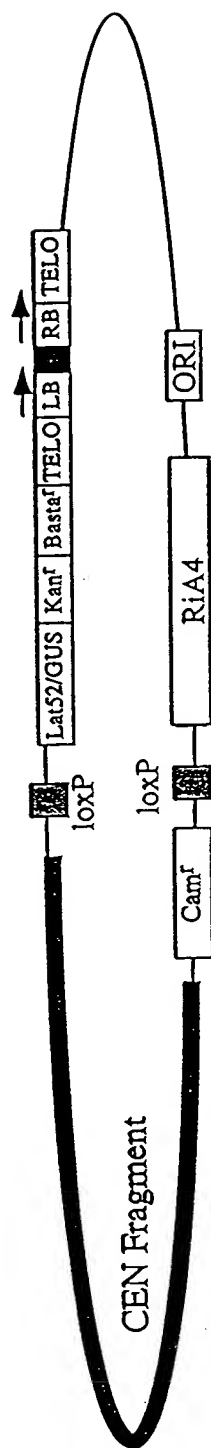


FIG. 11C

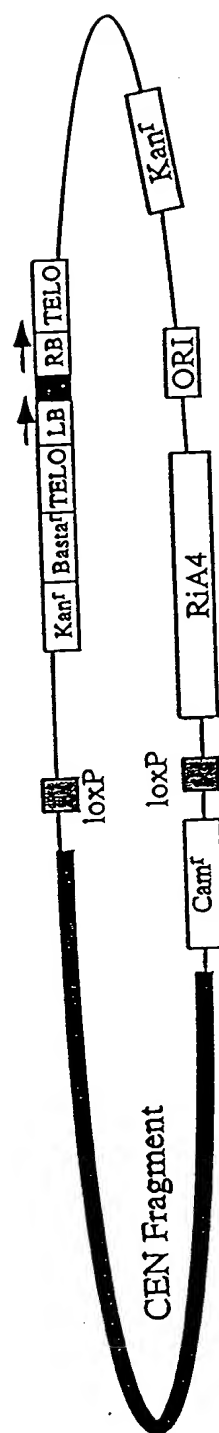


FIG. 11D

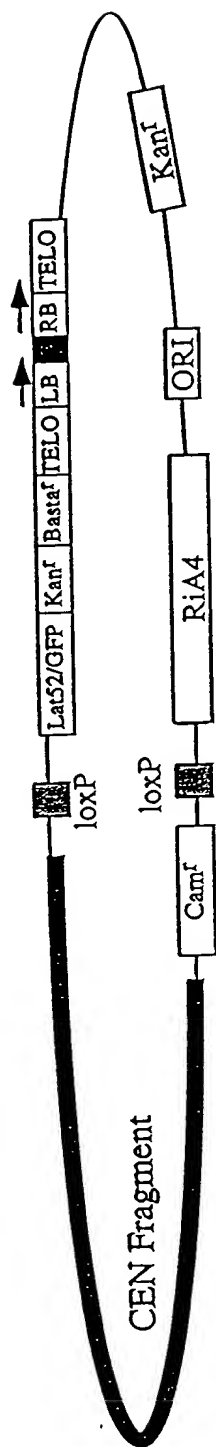


FIG. 11E

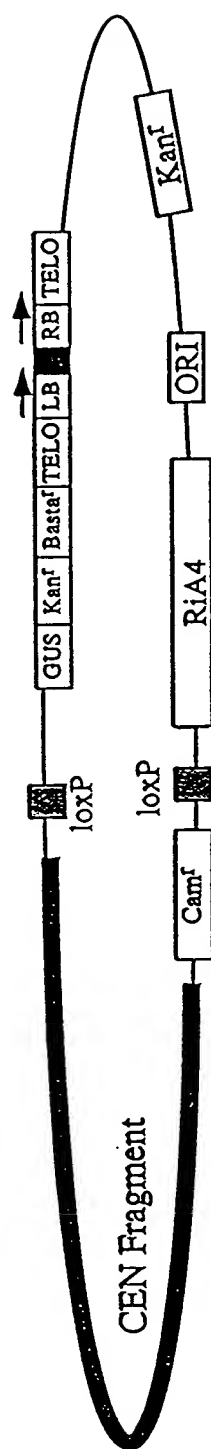
[illegible]

FIG. 11F

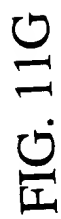


FIG. 11G

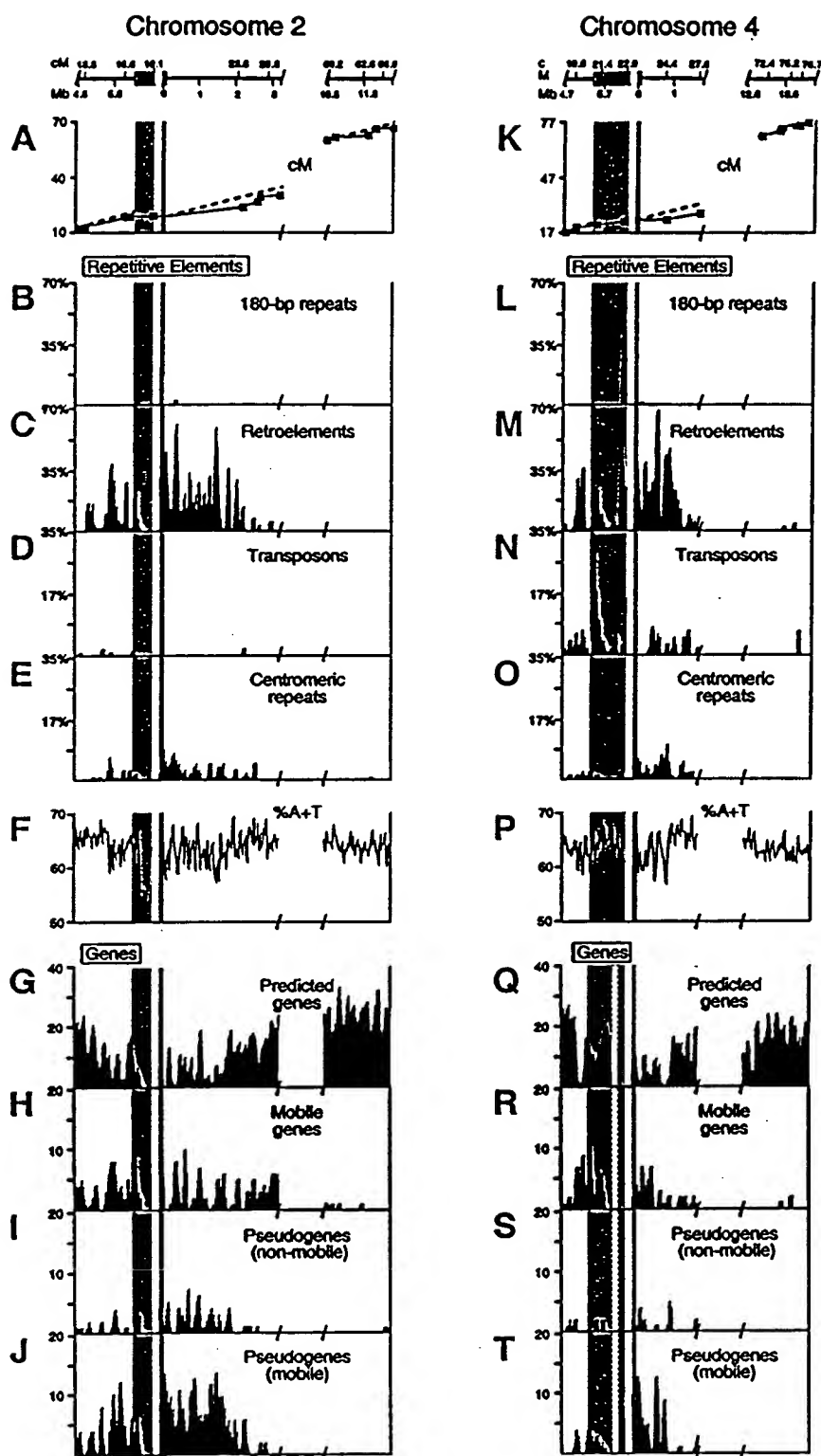


FIG. 12A-T

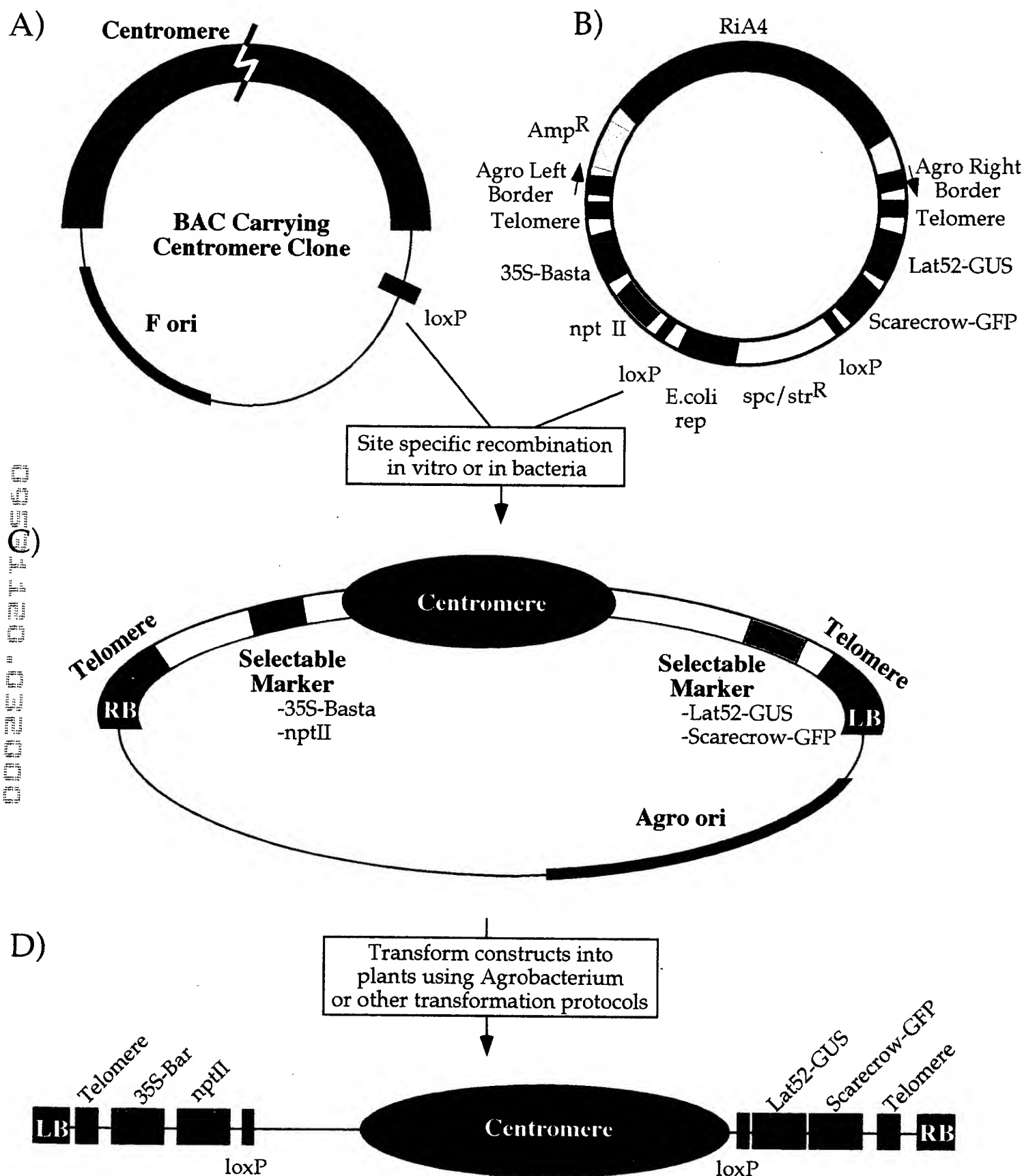


FIG. 13

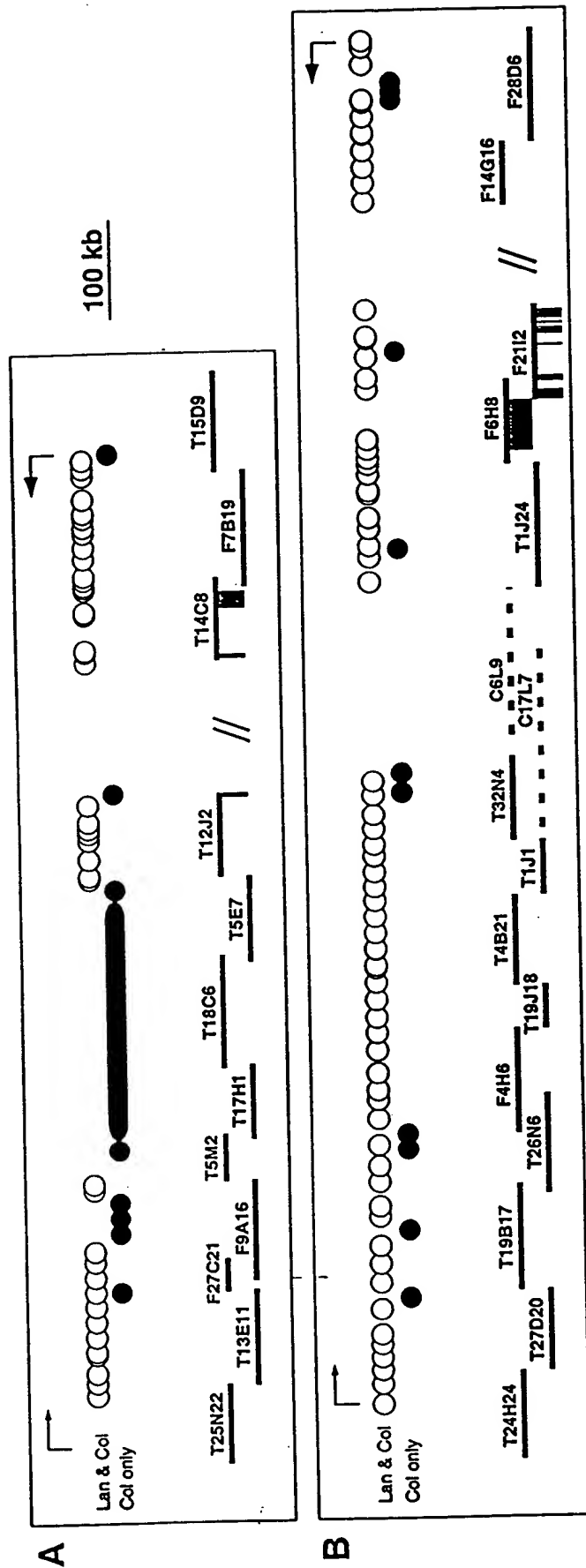


FIG. 14A, B

Sequenced clone	marker name	marker or primer pair	Marker location	marker properties, position	Forward Primer	Reverse Primer
T13E11	T13E11.01	primer	1755-2385	Lan & Col	AGCGCTGGGATGGGT TGGTTG	TTAATGCGGCAATGGCTGA ACAAG
T13E11	T13E11.30	primer	30628-31270	Lan & Col	CAGGTTGCGGTTACTA CATGGGTTTCAG	TATGCATGCGAGTTGGTGG AGGTAAAG
T13E11	T13E11.48	primer	48187-48969	Lan & Col	AAOCCCGGTAAATTA AAOCACAC	CGATACGGGCATGACTOCA G
T13E11	T13E11.63	primer	63886-64530	Lan & Col	ACGGCGGTTGAGAGG AGAAGC	COCCAAACGCAGCAAGAC AATC
T13E11	T13E11.78	primer	78190-78878	Lan & Col	AACAAAACAAATGCC AGGTCAGG	CTCCGGTCGCAAAGTTACA TACAG
T13E11	T13E11.93	primer	93907-94579	Lan & Col	GTTACCCCGGTCTCTGA GATTGAG	TTGGGGAGCAGGATTTGAT GTG
F27C21	F27C21.18	primer	18383-19057	Lan & Col	CAGGCGATTGTCTTTT ATAGGCTGTAAG	TTTTGCTGGAACGGAGGGA GTAC
F27C21	F27C21.02	primer	2570-3293	Lan & Col	ACAAAAGCCGAACCTC GTGGAAG	TGCGTGGTTGATTATTGCT GAAAG
F9A16	F9A16.71	primer	71978-72592	Lan & Col	AATGCTTTTGCGACTC TTTTGAC	TTGTTATTTTGGGTTTGGG TTGG
F9A16	F9A16.53	primer	53253-53921	Dom	CGCAGGCGGCTACTT GTTTG	GATGAATTGATCCGTTGTT TTATGICT
F9A16	F9A16.38	primer	37116-37733	Dom	CAAGGCGGGAAAAACA ACTC	AATTATTTTCAAACGGCTCT TTACC
F9A16	F9A16.22	primer	22166-22889	Dom	GTATTTAGCATTATGT TAGTCTGTTAGTGG	GCTCCTTGCGTATTCTTCAC C
F9A16	F9A16.03		3308-4091	Lan & Col	GATCCAGCAAOCCTTA GCCTCCTC	GATCCCTCAGTTGAAATC AATCTTC
TSM2	mito border	marker	17685	Dom	AAGGCATCAACGTTT GTGTG	CTACCAGGTAGGTGAAACG AGGGCCGAGCTCGTATGG A
TSE7	TSE7.23	primer	109092-109688	Lan & Col	ATTATTGGCTGCTGCA CTTCTGTAC	CGGTGCGCCTCGTTCTGTA TCTG
TSE7	TSE7.73	primer	73460-74120	Lan & Col	TCTCGGGAGTAGGGG CTTTGTTCTG	TCGCCAATGAAAGAGGGT AG
TSE7	TSE7.58	primer	57942-58583	Lan & Col	AGGGGGCTTACAAGA ATGAAC	CTAAATCCCGAAAAACCAA AOCAC
TSE7	TSE7.40	primer	40913-41537	Lan & Col	GTAGCGGGCTCAGTCT CATAACATC	TTGCTTAACCTATACCCGAC TAATGCAAGGGTCTGTAA TGGAAATG
TSE7	mito border	marker	13507	Dom	CGAATTOCTTCAGATG ATGC	AGTTTGCTTCGTGCTTGCT TATTATG
TSE7	TSE7.02	primer	2919-3585	Lan & Col	AAATGGCAGAAGCAG AAGCAGGAATAG	AGOGCAATCAAGCTATOOC TACATA
T12J2	T12J2.01	primer	1373-1998	Lan & Col	GTGTGGGCTCGTGTGA OCTGAC	CTCAGAATCCCAAAACAGA GCCACAC
T12J2	T12J2.19	primer	19369-20038	Lan & Col	CTGGCCCATCCCTTAT CGGTTTAC	AGACGGCTAGTGATTGGT GG
T12J2	T12J2.37	primer	37750-38359	Lan & Col	ACCTCCCCACACTTA AOCGACACTG	ATGGCGCAATCAAAAGCA ATCC
T12J2	ATEDA59	marker	50592	Lan & Col	TGAATGCTATGAAAG ATGGATGAAAC	
T12J2	T12J2.56	primer	56455-57533	Lan & Col	AATCGGGCTCGGTTGT GTAGAAAC	

FIG. 15A

T12J2	T12J2.73	primer	73911-74556	Lan & Col	ACTTGTAGGCCCTTTG ATGTTCTG	TGCTTTGTGTGCTTTGATT ATTCTATTAG
T14C8	T14C8.1	primer	8862-9544	Lan & Col	ACGAACCCGACGAOC ACTG	ACGCCCTTGATTCCATTCT TACC
T14C8	T14C8.6	primer	10837-11485	Lan & Col	GACGGTTGAAAGAA AGCACAG	AGAAGATGATGGCAAGT ACGAAGAG
T14C8	T14C8.7	primer	45334-46016	Lan & Col	CGACCATTCACGAOC ATAC	AAGGCCATTCAAAAAGATT AGGAGAG
T14C8	T14C8.3	primer	46672-47283	Lan & Col	ATAGOGTCAGOOCTCA TTTCAG	ACCCCTTTTGCTTGTATTTTC GTG
T14C8	T14C8.8	primer	48833-49538	Lan & Col	CAATGGGOGGAGGG GG	TGTGGCAAGTCATGGGTAA GGAG
T14C8	T14C8.9	primer	71115-71878	Lan & Col	GGTGGGGGAGAACGA TGAC	CCGTTTCTGCGATATTTG GTTAG
T14C8	T14C8.5	primer	73841-74456	Lan & Col	TTCCGCGOCCAAAAG GTG	AGAGTCAAGCCAAGCAAT AACAGG
T14C8	T14C8.4	primer	75442-76122	Lan & Col	AAGAAGGCTGGAAAT TGGTTGAG	GAGOGGAAGTAGATGCAG AATGTC
F7B19	F7B19.1	primer	108-757	Lan & Col	AAGGTCCGGCGGTGG TGAG	GGGTGAGTGATGTGATTG AGTG
F7B19	F7B19.12	primer	13831	Lan & Col	TAAOGTCATCAGOGGT AGGAAAC	TTACAAGCGAGAAAAGAT GAGAAGC
F7B19	F7B19.27	primer	27033	Lan & Col	CCCCGCTGAAGTGA GACTACGAG	TCCGCCAACGATAAGATA CGAC
F7B19	F7B19.2	primer	30189-30791	Lan & Col	GCTCGTTGCGGTTGCT GTTC	CCGCGGTGGCTGCTTTTAG
F7B19	F7B19.43	primer	43142	Lan & Col	CAGGGAAGTGGTTG GATTGATG	TGCTCTTCCGGAAGTGGT G
F7B19	F7B19.3	primer	55446-56209	Lan & Col	ATTTGTTGCCATCGT CCTTC	TTATCAATGTATTTCCCTG TGTATC
F7B19	F7B19.59	primer	59771	Lan & Col	TTGAAGAAATGCGCAT AGCCGTAG	TCTGGGATGAAGAGAAAG AGAACTGTC
F7B19	F7B19.4	primer	70859-71492	Lan & Col	AAAAACCGTGAGACC CATAAATG	TCCAAATCGCGAAAGTGAC AG
F7B19	F7B19.77	primer	77633	Lan & Col	ATAACCGAAGAAGCC GAGAAATC	ATCCGGAGACGAAAATGA ACTTAG
F7B19	F7B19.95	primer	95351	Lan & Col	TCGATTGCCAGCAGA GTCAGAAC	TGGGGCTTGTAAAGGAGG AGTAAC
F7B19	F7B19.5	primer	98977-99658	Dom?	AGATGGGGTGCTATT TTGTATG	GCGGTGAGTGATTGTCTG TAG
F7B19	F7B19.6	primer	112337-113039	Lan & Col	AGGGCGAAACTTTGA GAGCAC	TATCGGGTTTGAAGAGGG AAGG
T15D9	T15D9.3	primer	2985	Lan & Col	AGCGTCGGGGTGTG GAG	TOCTGGCAAATTGTCTTCT CGTTG
T15D9	T15D9.1	primer	12299-12914	Lan & Col	GCTCGGCATCTOCTC GTC	GAAGTCCATGCOCTATCC TG
T15D9	T15D9.19	MARKER	18991	LAST RECOMBINANT Col	GAGOOCTTCTATGAGC CTACCTGTTT	AGAGATCCOCTGTTACTAA AGCCTATTCTG
T15D9	T15D9.2	primer	37103-37728	Lan & Col	ATGGGGTAATCGAAT AGTGTGGTC	COCTAGGGCATCCGTTTTT ATCTC
T15D9	T15D9.3a	primer	52189-52811	Col	CGGAGAAAGTTGGGG GTTAGTTG	GAGAGGTTTGGGTTGGCT TGTAAG
T15D9	T15D9.55	primer	55134	Lan & Col	GCTGCGAACCCACAC TTTGCTC	ATGTTATCGTCGCGCGTT TTATG

FIG. 15A (cont'd)

T15D9	T15D9.73	primer	72993	Lan & Col	AACCGGTTGATAGTA GACGAGATG	TCCGGGGTTGCGATAGAG
T15D9	T15D9.4	primer	73930-74552	Lan & Col	GTAAGACGGAGCCCC TGAAG	AACATGTTAAAGCCAATAC CCTCTC
T15D9	T15D9.5	primer	86724-87494	Lan & Col	TCGGAAAGGCTAGAG ATGGGTAACTG	ATTGGACTATATGGGOCTC GTGAC
T15D9	T15D9.93	primer	93763	Lan & Col	TTTGCGGATATTCTAA AGGTGATG	TACTATTGCGCTGCTGTTG AGG
F7K9	F7K9.3	primer	21647-22276	Lan & Col	GGATGCAATGCCCGTT ATGATG	TCGAGGGAGGATGCTGAGT ATG
F7K9	F7K9.2	primer	12216-12843	Lan & Col	CAAAGCGGCCATCTC CTTC	GCAATTCATAOCCGACAT CTG
F7K9	F7K9.1	primer	3590-4226	Lan & Col	ACTATGCGTGGGTGG CTTTGTG	CAGGGGCATGCGGAATCTC
F12P23	F12P23.3	primer	61772-62430	Lan & Col	AGCGAGGTTATCTATC AGGGTTG	GATTAGGTCCGCTTCTTCC AGTTAG
F12P23	F12P23.5	primer	44870-45511	Lan & Col	CTTCATTTGCATCATC GTTATTAG	GGTGTGAAGTCTGAGGCTC CC
F12P23	F12P23.4	primer	40880-41507	Lan & Col	TACCCATGCGTTGACT GCTG	TTCTGAAOGTGTGTGTCT ATTG
F12P23	F12P23.2	primer	22431-23107	Lan & Col	TOGTGAACTAATTGG TGGGAAC	TOGGGAAGAGTGCCTAAG AG
F12P23	F12P23.1	primer	3352-4026	Lan & Col	ACAATGGCAACAATG GGCTGATAG	TTCGGGTCGTTGTTCCTAA AG
T4D8	T4D8.5	primer	81647-82250	Lan & Col	CTCGGTCTGGTAATGT GAAGTGGT	ATACGTCGCGGGAGTTGAG
T4D8	T4D8.3	primer	47146-47883	Lan & Col	GCCCGTCTGCCATCTC TATC	CGCCTCCTCACAGCCACA A
T4D8	T4D8.2	primer	21848-22453	Lan & Col	AAACTCGCCGCGCTCGT GTAAC	AGGATAAAGCCATAGCTTG ACCAG
T4D8	T4D8.1	primer	18915-19589	Lan & Col	CTCGTCTCATCCAAAT CCGTCC	CAATATAACCCGTCOCGT GAAG

FIG. 15A (cont'd)

Sequenced clone	marker name	marker or primer pair	Marker location	marker properties, position	Forward Primer	Reverse primer
T5H22	T5H22.00	primer	248-2654	Lan & Col SSLP	TTTGTACCCCTTTGGC TCGGACTGG	AAGGGGACACGCAC AAAAACGCTCTC
T5H22	T5H22.21	primer	21508-22868	Col Dom	GTCGCCCTTGGTCTAG TAAATGG	CTGTTCTGTCGCTTC TGCTG
T5H22	T5H22.41.3	primer	35072-35719	Lan & Col	TTGCGAGAAACTTGG AGGAACATC	TTAGAAAAGCATOG GGCAOCAAAC
T5H22	T5H22.41.4	primer	64404-65591	Col Dom	CTCCCTGTCATATTTTG TGACTG	GTTGCCAAAGTTCTC TAOGATTC
T5H22	T5H22.65	primer	65036-66470	Lan & Col	TCAACCTAAGGCAAAT TTTCTAAG	TTTAATGAAGGCOO AACAO
T7M24	T7M24.04	primer	4816-8214	Lan & Col	GTGCATGGCCTAAACA ACAG	GTTCTCATAAOGGTT CAGTCC
T7M24	T7M24.46	primer	46240-47868	Col Dom	ATGTTATGTTTAOGTC GGGTTGTGTTG	TCTGGCTCCGGATG CTATTTGTATTTTC
T25H8	T25H8.01	primer	1889-2953	Lan & Col	TGACGAAGAAGGGGG AAAAGTTG	TGACGTGGTGAAAG TAGGCTGTGAAG
T25H8	T25H8.17	primer	16846-17990	Col dom	ACTAAAGCCCCAACTG AAGAGGAAG	AAACCGCCACTACC GCCATAA
T25H8	T25H8.22.9	primer	22482-25074	Ler & Col	AATCGATCCGTCTTTC AOCAAC	CTTCTGCAGCOGTT CTTC
T24M8	T24M8.65	primer	65402-66309	Lan & Col	CGGCATGACCAAAACC TAAACTC	AGGGGAAAAGATGAA AGATGAAATAAG
T24M8	T24M8.54	primer	53851-54655	Col Dom	TAATAAAACCGCTCAGC CAOACTCTAAG	GGGCTGCTCCAATCT CGTACAC
T24M8	T24M8.43	primer	42439-43274	Lan & Col	CTTAAATTGCOOGTGA TGATGGTTG	GATGGAGTCGGCAA AAGATAGGATG
T24M8	T24M8.22	primer	22640-23386	Lan & Col	ACGAGAAGCGAAAAC CGAAGATAG	CGAACCTAAACCAA AOCTAAACTGAATC
T24M8	T24M8.09	primer	5961-8374	Lan & Col	GAGTCTGCGGGTAATT TOCTCTCG	ATTCTTGCGTGTCC TGGTGTAAAC
T24H24	T24H24.82	primer	82814-82890	Ler & Col	AGACAGCCGGAAGCA ATGGTGG	TCTCGCTGCTGGACA TACTCACTCAC
T24H24	T24H24.66	primer	66082-66765	Ler & Col	GTTGAAGGACCGGAGT TGTTAGAC	TGTGGATCGGTTATT GGAGGG
T24H24	T24H24.48	primer	47836-48636	Ler & Col	CCCCAGCCATTGAG TGAGTAG	AGCGGCGGCTTGA GAGTATC
T24H24	T24H24.11	primer	11212-11867	Ler & Col	GGCGGCGTAGTTATGT TGATTGAG	TAOCAAGGCCCCGA GATACTAAC
T27D20	T27D20.77	primer	77681-78420	Lan & Col	TCGCGCAATGGGACA CG	CGGGGAGGCTGGG AATC
T27D20	T27D20.64	primer	64198-66686	Ler & Col	AOCTGCGATAGAGTTG TGAGTTC	CTGCCTTTGCCGATA ATAGTC
T27D20	T27D20.51	primer	51084-51783	Lan & Col	COGCGGCTTATGCTG AG	GAAGAGAAATGCC TGTGAGTCC
T27D20	T27D20.41	primer	41203-42770	Lan & Col	GTGATTCGAGGACAT TGAGTG	TACATTTTGCAGCC ATTTTGTG
T27D20	T27D20.06	primer	6107-6887	Col Dom	TCGAATGGCTGAAAGA AAAGAATAAGAG	AAAACGGGTGGCGG AGAATG
T19B17	T19B17.96	primer	96402-97060	Lan & Col	CGTCTCCCGTGAGGTG GC	ATTTTCATAATTATT TGGCGTGTGC
T19B17	T19B17.77	primer	77318-78093	Lan & Col	CGAACCCCATCCGAAC TAAC	TGCCACAACAACT CCACTATG

FIG. 15B

T19B17	T19B17.59	primer	59092-59808	Lan & Col	AGCGGTCAATGTTCTT CAATGTGCTAG	TATCGOGGCGGAGT CAGGAG
T19B17	T19B17.44	primer	44057-44788	Col Dom	CTGCCCCGAACAOCTT TCAAC	TTGOGGATTGCTTAT GCTGTTCTC
T19B17	T19B17.30	primer	30680-31352	Lan & Col	ATCGCCGCGCTCTTCTT CAG	CAGGTTTCAAGCGTT CAACTATAATC
T19B17	T19B17.11	primer	11260-12044	Lan & Col	TCATTTGCGTCTAGAG GTGGAGTGC	GGGGTAGAAAGAAG CGAGAGGGATAG
T26N6	T26N6.12	primer	12724-13462	Lan & Col	CACGGCATCATTCATC AAAAGAG	GTAGGATCCGGCTG AATAGTGGTGG
T26N6	T26N6.27	primer	27839-28536	Lan & Col	TCTTCOGATGACGACA ACGACAC	ATTCTGCTGCTGCTG ATTCTG
T26N6	T26N6.42	primer	43996-44639	Col only	GAOGGCTTTTCATTCT CACACAG	TTTCATATTTGCTCA TCTAACCCCTTC
T26N6	T26N6.59	primer	59333-59938	Col only	GCTOGAACCCCTACAC CTCCAC	AGTCGCCGTAGCAA ATGAAACC
T26N6	T26N6.74	primer	74460-75083	Lan & Col	ATGGGGCCCTTTGACT ACTGAG	TCCGGAGACGATTTT GATGAC
T26N6	T26N6.93	primer	93352-93986	Lan & Col	TTCCCGCATGCATTAG TTCTTGTG	TTGCCATCATCTTTC TGTGTTTGTCTATC
F4H6	F4H6.44	primer	42567-43173	Lan & Col	GCAGACGCGAGGACA CAGACAG	CAGCCTAAGCCCAT TTGTTTTGAAG
F4H6	F4H6.60	primer	60209-60835	Lan & Col	GTTCACACGCTAGCAA GGTCTG	AGGGGCCAACATGC ACTACAAG
F4H6	F4H6.82	primer	82859-83642	Lan & Col	ACAAATCAGAGGOCOA AAGTCAATG	TGGGCGGAATAACA GCAAGTCC
F4H6	F4H6.100	primer	100331-101001	Lan & Col	ATCCAAACGCCAAAT GTCAAC	TTAAGTGCGGTGG GTTCAAATAC
T19J18	T19J18.12	primer	12781-13435	Lan & Col	ATGCCATAAAGAAAG CCCAGTC	CGCCTATCTTCGGTG TCTOGTC
T19J18	T19J18.27	primer	28093-29954	Lan & Col	CAGCGCTGTACAGTGG TCAAATG	CGTGGGTCAAGTGG GTCAGG
T4B21	T19J18.71	primer	6380-7009	Lan & Col	CATTACTTACCCGCTTC CGTCTTTATC	AATGTTAGTGCGAG TTTATGGTTGTGTC
T4B21	T19J18.42	primer	20045-20648	Lan & Col	TGTOGCCTTACTCCATT CGTTCAAC	OGGCGCCTTCATGT ATCTATCTC
T4B21	T4B21.20	primer	21757-22522	SSLP polymorphic	AATAGGCTTTTCCGGT GCTTCTC	AATTGATTTTGGGGT TTCTCTGTTT
T4B21	T4B21.35	primer	37346-38074	Lan & Col	GTGAAAGGAGCAGCA GGAACAGTG	ATTTATAGGCCAAT GAOCCAAATCG
T4B21	T19J18.57	primer	38498-39157	Lan & Col	CTATCAAAOCGAGTCA AAGAAAGG	AGAAGGTGAGOCOA AGAGATTAGTG
T4B21	T4B21.52	primer	54320-55077	Lan & Col	ATAGACAAAATTGGCA ACACATAACC	CAOGCAGCTCTTCAT CTCCTTTC
T4B21	T4B21.68	primer	69927-70543	Lan & Col	TTGTCATTGGCGCTGC TCTATC	GCTTTCCCAOCCAAT ATCCTTTC
T4B21	T4B21.83	primer	85772-86299	Lan & Col	AAGCCCGGATTGTTGT TC	CGCTACGCATGGGT CTATTG
TIJ1	TIJ1.08	primer	8862-9483	Lan & Col	TAGAGCGGTAACCTTAA CGAATGTGC	ATGTGGGGCCAAAT AAATCAAAAC
TIJ1	TIJ1.23	primer	23155-23843	Lan & Col	TGGAGGGCTTGATGT GAGAGTG	CAGAGCCGGATGAG AAAACAGAGC
TIJ1	TI5D16	marker	38027	CAPS	AATCAATTGGTTTCTA CTTTTATG	AACTCCGACTGAAG GTATAGC
TIJ1	TIJ1.39	primer	39177-40174	Lan & Col	ACGGGCTCATTGGCTA AAAAGTTC	TTAAGGGTTGGGGT TCATCTGTCAC

FIG. 15B (cont'd)

T1J1	T1J1.50	primer	50248-50937	Lan & Col	AAGTCTGGGAAGAGG ATGAGAAAOCC	ATAAAGTACGCCGC CCATCAATAG
T32N4	T32N4.09	primer	10175-11108	Lan & Col	GGCAGATACGGCGGGT CCATAC	TCTGAATGCGATCTC CTCGTGTAAG
T32N4	T32N4.24	primer	24917-25724	Lan & Col	CGTGGGAGCTGCCGTA GAAG	GCGTTGATGATGA AAATAGGGTG
T32N4	T32N4.45	primer	45840-46451	Lan & Col	CGCCCCCTCAGGTTAG TOC	GTITGCTCCOCTOCC AGTG
T32N4	T32N4.46	primer	46637-47558	Col Dom	CTGGCGTAOGAGAGTG CTTG TG	ATGACCOCTGTGCTTT TGCTOCTC
T32N4	T32N4.60	primer	60777-61645	Lan & Col	CTCTCGGCGTTGCTTCT GG	GCOCGGCTGGTGCT ATTC
T32N4	T32N4.66	primer	66497-67374	Col Dom	AAAGAAGCGAAACAA CATAACCATAG	GGAGACAAAGAAAT CGGCAGAGTAG
T1J24	T1J24.114	primer	114825-115648	Lan & Col	CATGCCCGAATTACGA CACCTC	GCGCCAAATCTCTA AACAACTC
T1J24	T1J24.90	primer	90665-91646	Lan & Col	AATGAATGGGACGAA AAOGAAACT	GCATCCCCGGTACT GGTGAG
T1J24	T1J24.81	primer	80921-81638	Col Dom	AATCGOGACTTTGOCT TOC	TAACTACTATOOCA CCAOCCTACC
T1J24	T1J24.79	primer	79569-80351	Lan & Col	GTGTATCGGGGGCCAT CTCAG	GCTCAACATCGCGG CAATCT
T1J24	T1J24.61	primer	60440-61245	Lan & Col	CCCAAAGTATAAGCGC OCACCTA	TAAGCGOCTCACTTC ACCATTG
T1J24	T1J24.51	primer	51061-51798	Lan & Col	TOCGGAAGGAGOCACA TAAG	TOOCCAGACCTCTOG TTGAC
T1J24	T1J24.27	primer	27855-28895	Lan & Col	GGCCGGGAGTTGGTCA TAAGG	TCAATTTCAATOOCC GCTGGTC
T1J24	T1J24.23	primer	23943-24800	Lan & Col	TGGTCGGGCATATTGT TTTTCTTG TG	CGGCGCTGTCCCTG GTTOC
T1J24	T1J24.01	primer	683-1663	Lan & Col	TTCCCCAAAAATCGTT CAGC	ACATCGCCTCTTCAA CCCACTC
F6H8	F6H8.70	primer	unknown-unique seq	Lan & Col -	ACCCGAGAAGCCGATG ACC	AAATTTGGGGGAGT TGATAAGTG TG
F6H8	F6H8.51	primer	unknown	Lan & Col -	GCTAAGCCATCCAAGT TCTGAG	GTTTGAGTCTTTGGC TTTGATGTTC
F6H8	F6H8.94	primer	unknown	Lan & Col -	CGTGCAGGGGAGTGTC GTG	CAATTTCAATCCCOG CTGGTC
F6H8	F6H8.114	primer	unknown	Lan & Col -	CGGGCTGCOCTTCATG TATCTATC	GOCCATTGTGCGCT TATTCTATTC
F21I2	F21I2.82	primer	82463-83233	Lan & Col	TTTTTGGGGATAGGGA TTGAGTG TG	TAAGOGGAAGGAGA GGTTTGAAGTTG
F21I2	F21I2.70	primer	70415-71220	Lan & Col	TGCTGGCOCTTTGTCATC TATTGTC	OOGCGGGGACTGCC TACTC
F21I2	F21I2.68	primer	68874-69938	Lan & Col	CCAGAGOCGGGGAAA GCAATAC	TAGOCGGGGTGGTC TOGTG
F21I2	F21I2.50	primer	50288-50891	Lan & Col	TGACTATAGGGGCGGT TGTGGTAAG	TTGGCTTGGAGTTTG CGTCGTC
F21I2	F21I2.48	primer	48960-50345	Col	ACCTTTCTTCTCAACG CAOCTCAOC	AAOCCCTTGGCATAT AACTCOGACTC
F21I2	F21I2.29	primer	29895-30702	Lan & Col	GTGGGGTCGAGTGGTG TGGTAG	GGATCOOCTGTTACT TAAGCCTATTC
F21I2	F21I2.02	primer	2313-3098	Lan & Col	AAAATCCTCCCGCGTC AACATC	CATCATCCCAATCCC AAATACAAGTC
F14G16	F14G16.100	primer	3496-4174	Lan & Col	AAACTTTCGCCACTCT OCTCTATTATG	ATTTGCGTAAGGGG TTGATGACTC

FIG. 15B (cont'd)

F14G16	F14G16.81	primer	22905-23604	Lan & Col	CGTCTTCATCGGCTTC GTTTCAG	TGGGGAGCGGAGGA TTCTTG
F14G16	F14G16.66	primer	37689-38299	Lan & Col	AGCGATTGTACCCCA CCATTC	GCTCCGGCAATCTTC TTCCTCTC
F14G16	F14G16.49	primer	54150-54777	Lan & Col	ACTTTGGGCAATGAAG CGTATG	AACCCCTTAGGATT ATTGCTAGTGTTT
F28D6	F14G16.32	primer	8172-8825	Lan & Col	TCTCGCAGTTGCAGAG ATGGTG	TCCGGAAGAGAAG AGTGATGG
F28D6	F14G16.66	primer	9445-10055	Lan & Col	AGCGATTGTACCCCA CCATTC	GCTCCGGCAATCTTC TTCCTCTC
F28D6	F14G16.16	primer	24251-24873	Lan & Col	TGGTGTATTTTGCTTT GTTTCTCAGG	GTGTGTCGCTATGG GGCTAAGG
F28D6	F14G16.01	primer	39801-40577	Lan & Col	GTGCGGAAATGTCTGG GCTC	AATCACTCAACCGC GAAACTCTATC
F28D6	F28D6.42	primer	42565-43225	Lan & Col	ATCAACCCCCAAATCA CCAGAAAC	AATCGGGTTAGCC ACTTCATC
F28D6	F28D6.50k	MARKER	50323	Col Dom	CGGCTGGCTTTATTAT CTGAGTTG	TTCGGGAAGCCTGT GGAAG
F28D6	F28D6.58	primer	58994-59869	Col Dom	ACCCCGAGCTCAACTT CTTAGG	GGACGGGAGATGGG ATTACC
F28D6	F28D6.76	primer	76571-77289	Lan & Col	AGAATAGGAGCTGGG AGGTCAAAC	ATACTTAGATGCAA TGGGTGTGGTG
F28D6	F28D6.93	primer	93823-94512	Lan & Col	CCCCATCCTGCCGACA TAAAG	TACTCCGCATCATCT TCCATCTCTTC
F28D6	F28D6.120	primer	7985-8702	Lan & Col	GAGGGGCGAGTAGTTG AATCTGC	CCTAAGCCCGAAAC CAAGTGAG

FIG. 15B (cont'd)

100kb

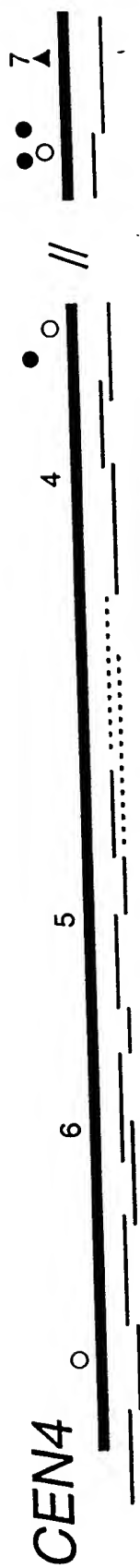
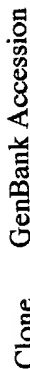


FIG. 16

Figure 1 illustrates the experimental setup. A participant is seated at a table, looking at a video screen. On the screen, a target (a small circle) is displayed. The participant's hand is positioned at a starting point (a larger circle). The distance between the starting point and the target is labeled as 'Distance'. The participant's hand is also labeled 'Hand'.



T25N22	AC005693
T13E11	AC006217
F27C21	AC006527
F9A16	AC007662
T5M2	AC007730
T17H1	AC007143
T18C6	AC007729
T5E7	AC006225
T12J2	AC004483
T14C8	AC006219
F7B19	AC006586
T15D9	AC007120

FIG. 17

CENTROMERE 4

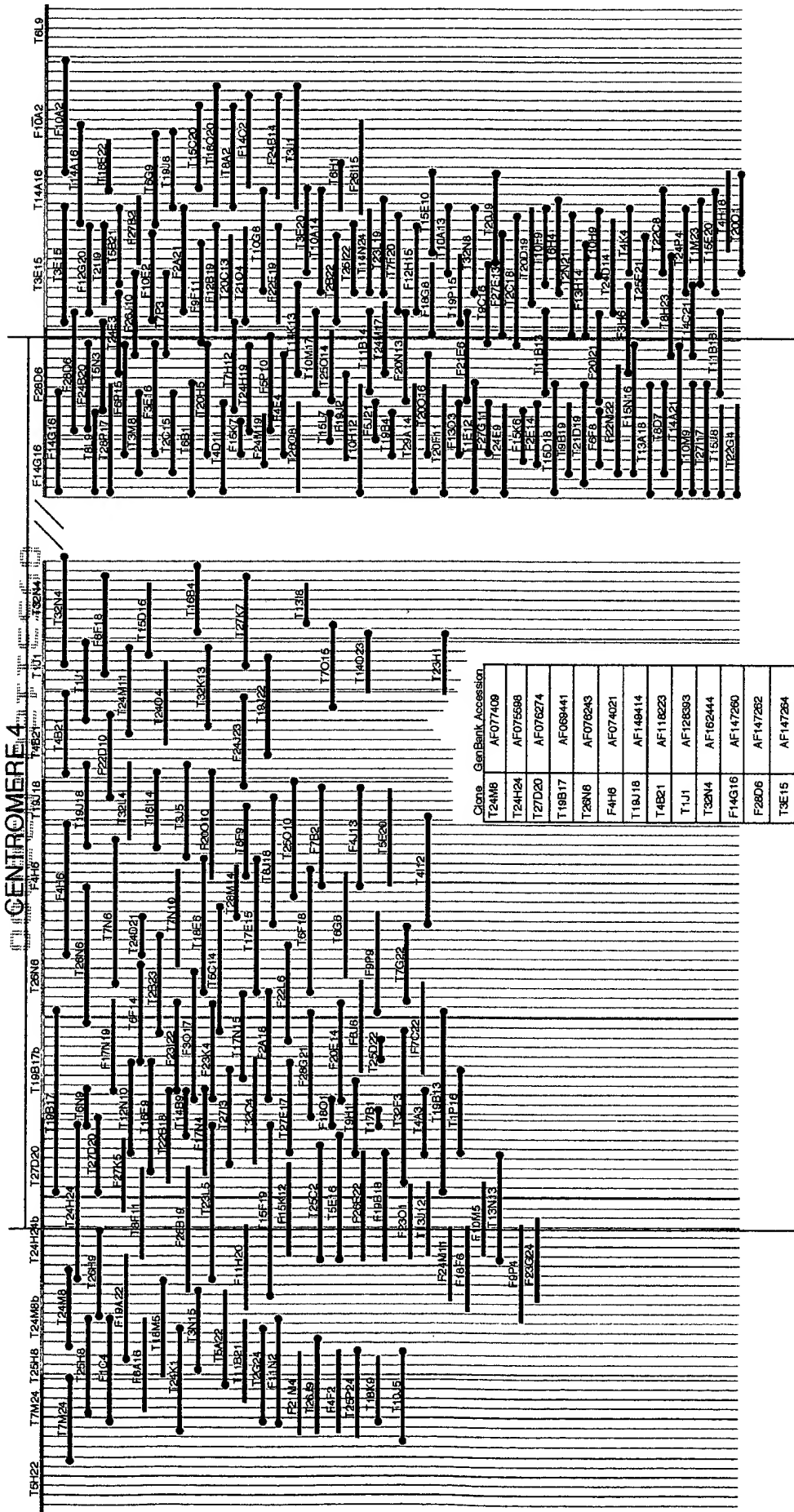
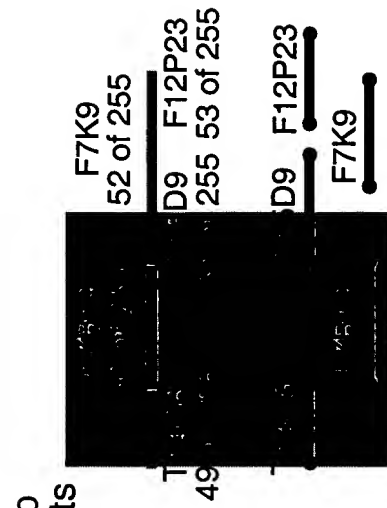


FIG. 18

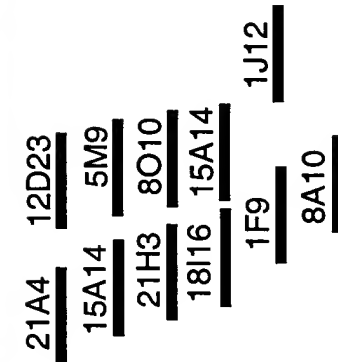
CENTROMERE 2



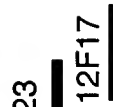
180 bp
Repeats

//

GEN2
Sequenced
BAC Clones



Physical
location of
BiBACs



180 bp
Repeat-rich BiBACs

10C23	11M8	7K18
3D4	1J18	9D20
18B10	6N2	4J2
7F11	12A10	6I9
1C1	11N16	1E15
17O10	12O13	10G22
3D6	11G22	

FIG. 20

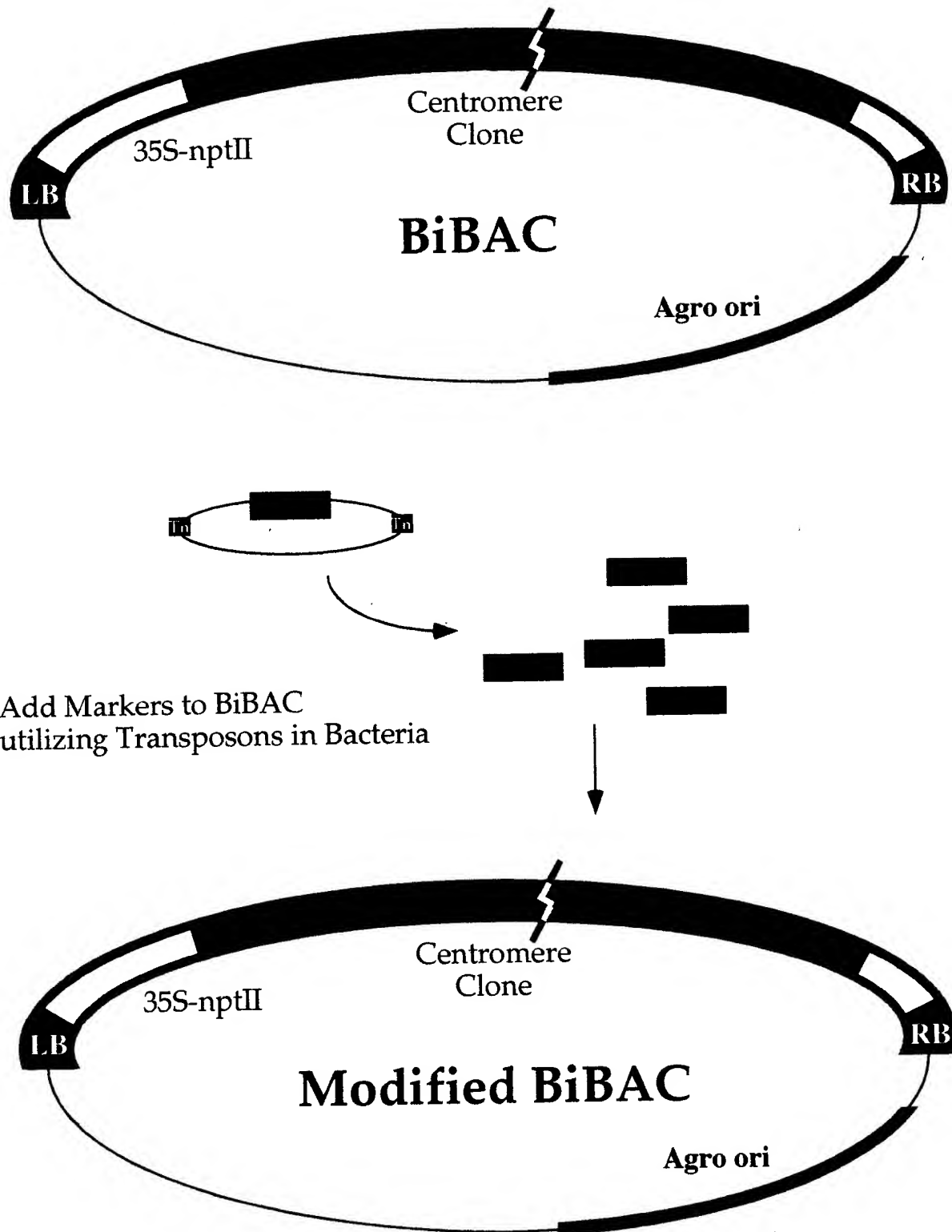


FIG. 21

Measuring centromere functions in plant mini-chromosomes

Qualitative assays

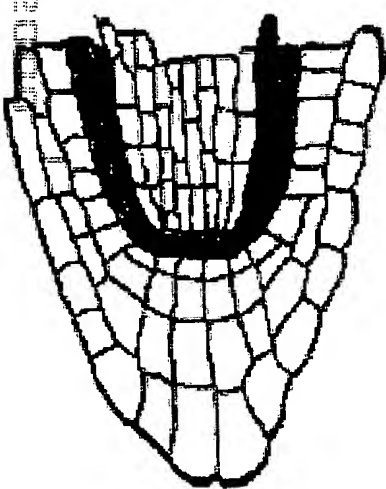


Stable

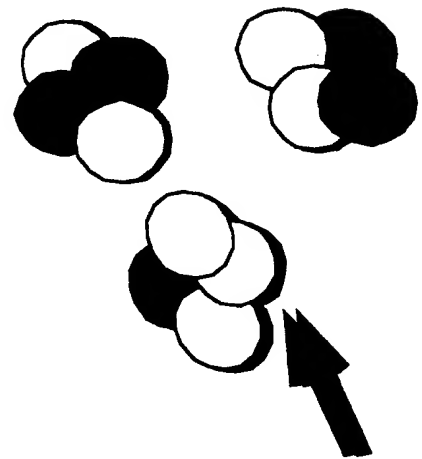
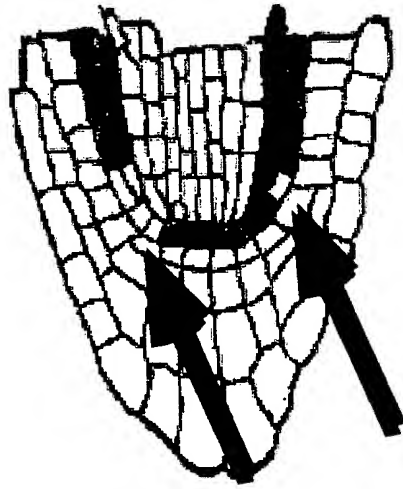


Unstable

Quantitative assays



Mitosis



Meiosis

FIG. 22

[illegible]

FIG. 23A

[illegible]

FIG. 23B (cot'd)

Alignment Worksheet of CHRA-1, using Chualar method with Weigman's resource weight it more.
Tuesday, March 7, 2000 4:15 PM

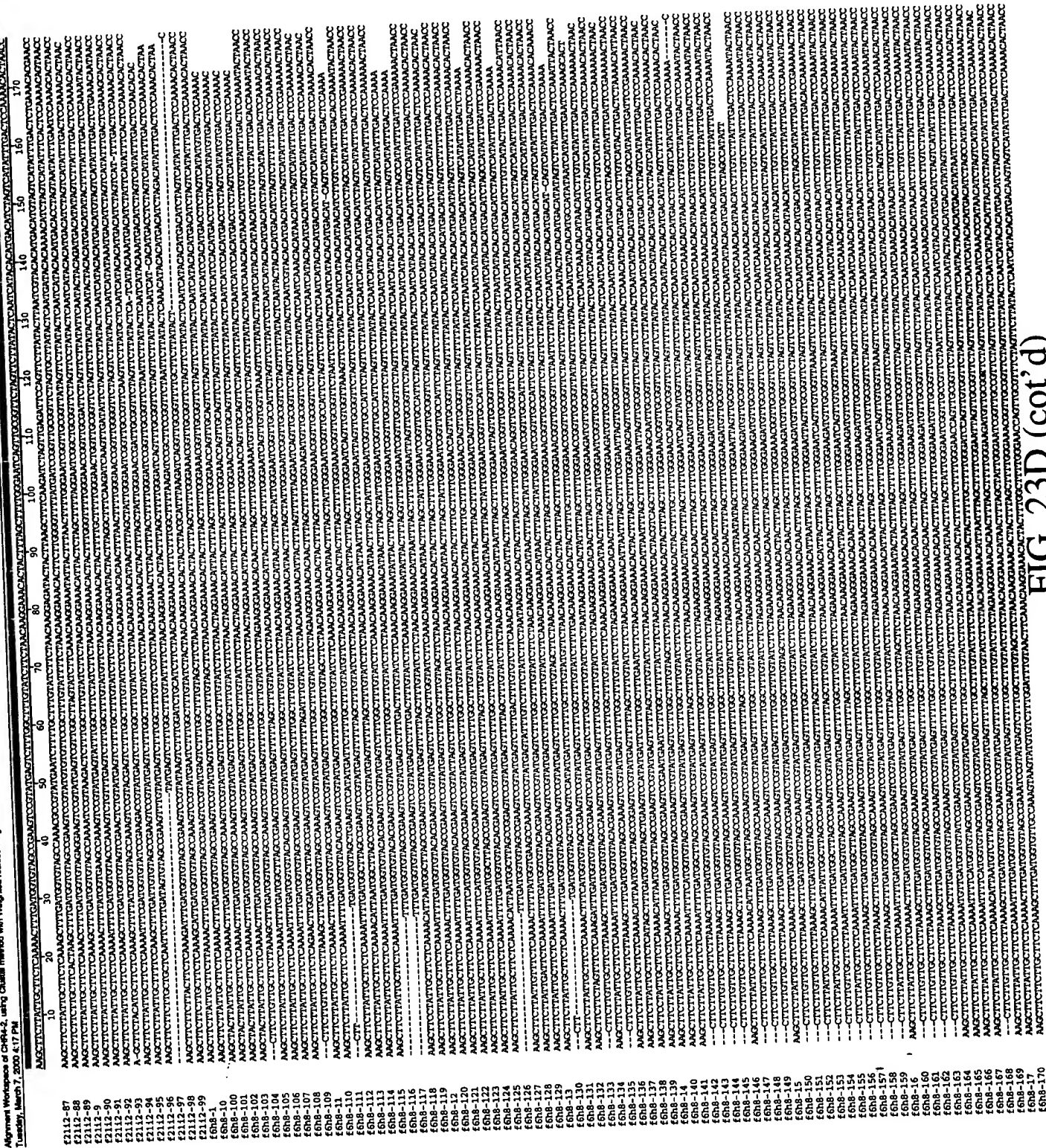
[illegible]

FIG. 23D

[illegible]

FIG. 23D (cot'd)

Alignment Workspace of CHEM-2,
11/1/2000 4:17 PM



[illegible]

Alignment Workspaces of CHRA-3, using Clustal method with Weighted residue weight table.

Tuesday, March 7, 2000 4:30 PM
 f6b8-6
 f6b8-7
 f6b8-8
 f6b8-9
 f6b8-10
 f6b8-11
 f6b8-12
 f6b8-13
 f6b8-14
 f6b8-15
 f6b8-16
 f6b8-17
 f6b8-18
 f6b8-19
 f6b8-20
 f6b8-21
 f6b8-22
 f6b8-23
 f6b8-24
 f6b8-25
 f6b8-26
 f6b8-27
 f6b8-28
 f6b8-29
 f6b8-30
 f6b8-31
 f6b8-32
 f6b8-33
 f6b8-34
 f6b8-35
 f6b8-36
 f6b8-37
 f6b8-38
 f6b8-39
 f6b8-40
 f6b8-41
 f6b8-42
 f6b8-43
 f6b8-44
 f6b8-45
 f6b8-46
 f6b8-47
 f6b8-48
 f6b8-49
 f6b8-50
 f6b8-51
 f6b8-52
 f6b8-53
 f6b8-54
 f6b8-55
 f6b8-56
 f6b8-57
 f6b8-58
 f6b8-59
 f6b8-60
 f6b8-61
 f6b8-62
 f6b8-63
 f6b8-64
 f6b8-65
 f6b8-66
 f6b8-67
 f6b8-68
 f6b8-69
 f6b8-70
 f6b8-71
 f6b8-72
 f6b8-73
 f6b8-74
 f6b8-75
 f6b8-76
 f6b8-77
 f6b8-78
 f6b8-79
 f6b8-80
 f6b8-81
 f6b8-82
 f6b8-83
 f6b8-84
 f6b8-85
 f6b8-86
 f6b8-87
 f6b8-88
 f6b8-89
 f6b8-90
 f6b8-91
 f6b8-92
 f6b8-93
 f6b8-94
 f6b8-95
 f6b8-96
 f6b8-97
 f6b8-98
 f6b8-99
 x f6b8-93

FIG. 23D (cot'd)